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## THE GREAT STONE FACE.

E. B. BRYAN, PROFESSOR OF LITERATURE IN BUTLER COLLEGE.

In tracing out the development of any living thing in any direction, we find two tendencies manifesting themselves. These are (1) persistency of the type, due to inheritance, and (2) change, due in great part to natural, and in human life, to institutional environment.

The imagery of "The Great Stone Face" as set forth at the beginning is Ernest, whose development toward an ideal we are to follow; his mother, as typifying the source of his inherited tendencies: and the Stone Face itself as the most potent external influence in Ernest's experience.

Whatever else may be gotten from the story, (and what may not be gotten from it?) to me, the thought of the growth into grace and wisdom and power through hopeful expectancy is most helpful.

Four times it seems Ernest's hopes are to be realized, and four times he is to meet with disappointment—disappointment over which he has no control, and yet disappointment due to himself. Had he not seen the Stone Face as he did see it, he might have seen the fulfilment of the prophecy as he did not see it.

Now, he goes with his neighbors and friends to witness the return to his native village of one Gathergold who, as rumor would have it, is the exact likeness of the Great Stone Face and, therefore, the fulfilment of the prophecy.

His associates clamor and applaud and shout. They see what they come to see. Who does not?

Ernest shakes his head and, although hard pressed, he cannot see as those who see not. In the valley, majority-rule prevails, and Gathergold is hailed and accepted as the Great Stone Face. In his palace of magnificent luxury, he takes up his abode. For a time, the spell remains unbroken, but silently and unawares comes misfortune and as mysteriously as he came to resemble the Great Stone Face, the resemblance now vanishes. But the prophecy is to be fulfilled, and so after many years of waiting and wondering, the people hail with great joy the glad tidings of the return to his old friends and neighbors of a renowned general, Blood-and-Thunder, a mighty warrior who for his deeds of valor on a thousand battlefields has justly gained the honor and distinction of resembling in every feature the Great Stone Face. Great preparations are made for his reception. A magnificent feast is spread in his honor, and the Rev. Dr. Battleblast officiates with the dignity and reverence becoming "the cloth." And so Gen. Blood-and-Thunder is duly installed in the minds and hearts of the people. But Ernest turns sadly away toward the Great Stone Face from which there seems to come a word of good cheer and encouragement.

"When the people's minds had had a little time to cool, they were ready enough to acknowledge their mistake in imagining a similarity between Gen. Blood-and-Thunder's trunculent physiognomy and the benign visage on the mountain side."

But they do not stay cool. After Ernest has worked on for many more long years and others have waited for many more long years, their minds are suddenly brought to a fever heat as day after day, the newspapers give glowing accounts of one Old Stony Phiz, a man who has forged his way to the front ranks of statesmanship and who by the purity of his thoughts and the nobility of his deeds has developed into the exact likeness of the Great Stone Face. The royal welcome he receives on his return surpasses that of any similar occasion. Happy are the people who behold him; even those who get but a glimpse of his benign countenance are doubly repaid. Satisfaction reigns supreme, for has not the hope of long years been realized? To all but Ernest it has; but he, and he alone, must turn away from his jostling, jeering friends to seek solace from a source unknown to them.

Ernest has grown to be an old man. The short hours of eventide are upon him and as his life and mood are in harmony with the world about him, he clings not to the arduous, active duties of life, but betakes himself to the quiet perusal of the thoughts of the inspired men of his time. What his experience is and how his hope of the final fulfilment of the prophecy brightens as page after page he reads from the pen of the poet will never be told, and will never be known by him who is not rich in similar experience. But he reads, and he longs and he hopes. In vain? From the standpoint of the realization in the poet, yes. From the standpoint of soul growth, no.

The poet admits with shame that his life has not always been as high as his thoughts. His thoughts are divine, and so it is that through the almost divine insight of the poet, the resemblance of Ernest to the Great Stone Face is revealed to himself and his neighbors.

Thus goes the story and how are we to account for Ernest's development as seen in the story?

Ernest's experience was the experience of every one who has seen something; he saw something that he could not explain. To whom could he explain it? To those who had seen somewhat. But none had seen; they had simply looked. And so he must get his consolation as every other Ernest must—from himself and from his ideal.

The attitude of Ernest's friends was as we might expect, seeing superficially, they clung freely but unsteadily to their successive heroes.

Material and economic stimuli have always appealed to man—the things that men can see and handle and display have stronger motive force, especially upon the untaught and unthinking, than any other stimulus, and so, we need not be surprised at the characters through which the fulfilment of the prophecy is to be realized. First, we have Old Gathergold, a money-maker, the only motive force in whose life has been purely economic and material. He had his followers in Ernest's neighborhood as he has had, and probably always will have, in every other place.

Then comes Gen. Blood-and-Thunder, perhaps a higher type, a warrior, the stimuli to whose activity have been semi-material and semi-economic, and yet a degree of socialistic and ideal tendency is seen.

Old Stony Phiz possibly represents a higher phase of human activity, having an altruistic profession, however egotistic his attitude in it may have been. And, finally, we have the poet, free to a high degree from the material, living, approximately, an ideal life, but he does not appeal to the people as have the others. Ernest alone hopes for the realization through him. The relation that existed between Ernest and the Great Stone Face was a relation peculiar to them alone. Ernest clinging at every step; the Great Stone Face reassuring at every step.

And so it is that Ernest, through a long life of longing, contemplating, hoping and praying has come to be the likeness of that which he contemplated, and which he so earnestly desired to see realized in another. Quietly and unconsciously it came as grace and wisdom always come. Not clamoring for distinction or preferment, he performs daily the commonplace duties of life as they present themselves, and is satisfied with the result as the natural fruitage of the life.

As it was with Ernest, so it will ever be with man. They who work on in whatever line their own conviction and the constitution of their environments may dictate, happy in their work, contemplating the highest and longing for the best, will wake up some sweet day to a realization of the fact that they themselves are the embodiment of their contemplated ideals.

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### AUTUMN TRAVELERS—No. 3.

PROF. D. W. DENNIS, EARLHAM COLLEGE.

---

Miss A. and her children took their third outing on Friday P. M., October 16. As we started out, I asked Lucy and Jennie what they had learned since their last outing. "We have," Lucy answered, "studied other cases of commensalism: The oak supports the vine and the vine makes the oak beautiful." "But is beauty," I asked, "a compensation?"

"Oh, yes," said Jennie, "we have learned from Victor Hugo's good bishop that the beautiful is as useful as the useful—more so perhaps. And from Emerson's 'Rhodora' that

'If eyes were made for seeing,  
Then beauty is its own excuse for being.'

"Miss A.," Lucy continued, "brought a branch of oak with

a mistletoe bough upon it to school which she said she obtained from N. C. She told us that the mistletoe is borne aloft on the oak without any stem of its own reaching to the ground; that it is a most beautiful winter ornament to the oak; so there is commensalism between the oak and the mistletoe; and the seeds," she said, "of the mistletoe are berries which birds like, but they are gummy and stick to the bills of the birds. The birds fly off to other branches and wipe their bills on them and plant the mistletoe just where it can grow. Miss A. also brought some crawfishes to school in glass cans. There was a white velvety covering all over the shells of the crawfishes which we saw also under the microscope. Miss A. called the white furze, vorticellæ, and we saw them shorten their stems and coil up and work their cilia which seemed to be little wheels rolling around their heads. 'The vorticellæ,' Miss A. said, 'get to ride in this way here and there through the water; if they grew on the rocks, they would be obliged to remain in one place.' She also brought 'Dana's Corals and Cora's Islands' from the library and showed us a picture of how the sea anemone sometimes rides on the back of a crab."

We had by this time reached Happy Hollow from which we passed up the west fork beyond the falls; Miss A. directed the children to look out for suckers in the deeper places along the stream. Joseph whose eye is quick for everything in nature and who is noted for his skill at fishing pointed them out here and there until all had seen them shooting hurriedly through the water and suddenly stopping where they could generally only be seen by those who had seen them stop.

"Why," asked Miss A. at length, "is it so difficult to see the suckers? They are the largest fishes by far in the stream."

"Why, they look just like the ground," said Frank, "the spots on them are the color of the stones exactly." "And they lie so still and so close to the bottom," said Paul. "And they dart so rapidly through the water one can hardly follow them with the eye," said Jennie.

"Frank's reason is the main one," said Joseph, "they look so nearly like the ground."

"This is right," said Miss A., "it is a case of mimicry. You will remember that this is a term applied by naturalists to an animal's likeness to its surroundings. Have not many of you seen other examples of mimicry?"

Joseph had noticed that the plant lice on a potted geranium were green.

James, who went last August to Winona Park, said that the mussels were coated with a green slime on the part above the sand, like the ground around them.

Frank said that grasshoppers so resemble the grass that when they jump up at your feet in droves, it requires careful looking to see them.

Miss A. related Riley's "Experience with the Tree Toad" which he had so much trouble to find. A dozen boys at once said in substance that they had lost the tree toad when they knew it had not jumped more than a few inches; the spots on its body were so like the lichens on the tree.

We passed on to the thick woods west of the stream above the falls. We had gone but a short distance until Joseph called out that he believed that he saw a humming-bird's nest. He pointed it out high up on the limb of a tree but the children concluded that it was only a knot or rather a gentle swelling on the limb. The tree had branches nearly to the ground and very soon Joseph and three other boys were climbing up followed by a shower of admonitions to be careful. They all shouted down that it was a real nest; that the bird had surrounded the nest with moss which sloped off in every way to the limb, and Joseph added, "I have sometimes seen the humming-bird on her nest and the green of the moss so blends with the green of the bird that it is difficult to distinguish it from a real green knot on a limb." It was concluded that Joseph and James would come back next day with a saw and get the limb and take it to the school-house.

Miss A. said that a friend of hers had visited the south Kensington Museum at London and that a large room there was devoted to birds; that her friend said she had seen there a humming-bird's nest with the bird on the nest and that she described it just as Joseph had. That she also saw a water-bird surrounded by its native pebbly shore, grown up more or less compactly with tall grasses and labeled with the suggestion, "find the nest." She had almost given up finding it when she at last saw the eggs among stones so nearly like them that only with difficulty could she distinguish eggs from stones after they were found. She said it was the way in this museum to bring all the surroundings of the bird in with the bird and if the museums generally had one-

fourth as much in them, and had it arranged like this, they would be four times as valuable.

Miss A. now directed our walk to a dry bank where there was no grass and the soil was somewhat sandy and loose and where there were thirty or forty pitfalls constructed by ant-lions. Frank saw them as soon as we got there and called out "oodles." Joseph insisted that they were "doodles," but both agreed if you called them gently with your mouth close to the ground, they would come up and move the gravel at the bottom of the pitfall. Miss A. charged the children that if they saw the gravel begin to move, they should run a knife or piece of bark under the ant-lion and lift him quickly out of his pit and try to capture him. Twenty mouths were immediately down over the pitfalls chanting "oodle" and "doodle" by turns and sure enough the ant-lions responded; but only Joseph and Frank, who evidently had tried the trick before succeeded in capturing one. Miss A. put them in a low-rimmed box lid with some of the sand and the children with surprise and pleasure gathered around. A dozen exclaimed at once, "they are the color of the sand."

Jennie said, "last spring mamma planted out a bed of pansies and cut worms began to eat them up; mamma killed twenty-nine of them and she said they were hard to find; that they were just the color of the soil."

"And I have read," said Jennie, "that tigers are hard to find in the striped grass of their native jungles and that the spots on giraffes resemble the lichens on their native trees."

"My grandfather" said Johnnie, "used to live in Maine and he says that the rabbits up there are white in the winter when the ground is white with snow and brown in summer when the ground is brown."

"I have often seen walking sticks," said Joseph, "and they 'play 'possum' and look exactly like a stick if you touch them."

"And I", said Frank, "have often seen walking leaves; little insects with wings green and veined like a leaf."

"But why," asked Lucy, "do all these animals resemble their surroundings?"

"Is this resemblance to their surroundings any advantage to them?" Miss A. asked.

"They are hard to find and may thus often escape their enemies," said Joseph.

"Yes," said Miss A.; "it is all a question of protection. Wordsworth has a beautiful poem about the green linnet which he wrote in Dove Cottage orchard in which he says :

'My dazzled sight he oft deceives  
A brother of the dancing leaves.  
Then flits and from the cottage eaves  
Pours forth his song in gushes ;  
As if by that exulting strain,  
He mocked and treated with disdain  
The voiceless form he chose to feign,  
While fluttering in the bushes.'

Just then a red bird and his mate lighted in a tree close by ; many of the children had not before seen this bright plumaged, crested, great beaked bird and they thought him very beautiful.

"But why," asked Jennie, "does he associate with that drab-colored, homely little bird that is with him."

"That's his wife," said Frank, "we used to raise red-birds in the country."

"Is it not generally the case, Miss A.," asked James, "that the male bird is the handsomer?" "It seems to be," replied Miss A.; "Bryant so describes the Bobolink, at least :

'Robert of Lincoln is gayly drest,  
Wearing a bright black wedding coat ;  
White are his shoulders and white his crest ;  
Hear him calling his merry note.

'Robert of Lincoln's Quaker wife,  
Pretty and quiet, with plain brown wings,  
Passing at home a patient life,  
Broods in the grass while her husband sings:  
Nice, good wife that never goes out,  
Keeping house while I frolic about.'"

"Why is this, Miss A.?" asked Johnny.

"The female," Miss A. replied, "must sit on the nest, and if she had bright colors she would be seen and caught by birds or beasts of prey. The male may fly everywhere at will and take care of himself."

"But it is not always true," said Lucy, "that the mother birds are clad simply ; an oriole nested in our yard and the female is most beautifully colored."

"The oriole," said Miss A, "is the hang-bird, and she builds a nest that conceals her, and so does not need to put off her gay attire."

"But this," said Lucy, "was not a hanging nest at all."



"Very interesting", replied Miss A. The oriole has learned that your father keeps hawks, owls and other birds of prey away, and that she does not need her hang-birds nest; and who that has a beautiful dress would not display it if there is no danger?

As we started for home Miss A. observed. "Mimicry is a subject too large for one or even for many excursions. What we must remember from to-day is that many animals resemble their surroundings." And the children reviewed the list from memory: Suckers, ant-lions, plant-lice, mussels, grasshoppers, tree-toads, cut-worms, rabbits, walking-sticks, walking-leaves, tigers, giraffes, and female birds. It was mentioned again that the eggs of birds sometimes greatly resemble their surroundings, and Miss A, by questioning the boys, brought out the fact that eggs laid in the dark, as the woodpecker's, in holes, in trees, and the bank swallow's, in the ground, are always white.

"But why is it," asked Frank, "that this is so? I have helped hunt tobacco worms, and they are very hard to find, as they have just the color of the tobacco. I see that mimicry protects animals, but how does the mimicry come about?"

Miss A. assured him that his question was of the highest importance, but that it could only be answered by considering many facts, and that they would have several subsequent lessons on it.

"Just now," she added, as we stopped for a short rest, "tell me, if you can, how it could be otherwise than that animals should resemble their surroundings. Do not children who have been friends for a long time resemble each other? They used to make idols in Asia Minor and Palestine, and it was said at that time, 'They that make them are like them, so is every one that trusteth in them.' All successful men come to love their work and to admire what they make. How could a man all his life admire and love and trust his idols and not be like them? The homes we live in, the church, the school, the country, the company we keep, all help to make us what we are. Brutus visited with Cassius, and he became like him; and one day, when Brutus was away, Cassius said:

'Well, Brutus, thou art noble; yet I see  
Thy honorable mettle may be wrought  
From that it is so disposed; therefore, 't is meet  
That noble minds keep ever with their likes.'

"We become, and can't help it, like the thoughts we think.

Solomon said, 'As a man thinketh in his heart, so is he.' Goethe said:

'You resemble the spirit that you comprehend.'

He says, also, in the same great drama:

'Every one sees what he carries in his heart.'

"Many, many people have gone to the falls and the woods beyond, and have not seen what you have this afternoon. A great traveler once returned from a journey around the world and said:

'O'er land and sea I traveled wide,  
My thought the earth could span;  
But wearily I turned and cried,  
Oh, little world of man!'

He afterward, in another spirit, made another trip, and when he came back said:

'I wandered by a green woodside  
The distance of a rod;  
My eyes were opened, and I cried,  
Oh, mighty world of God!'

"Have any of you," Miss A. continued, "read Hawthorne's story of 'The Great Stone Face'?"

Five of them had, Jennie among them.

"Why did Ernest, of all the thousands who lived in the valley, resemble the great stone face?" Miss A. asked. "Why did not the millionaire? The soldier? The poet?"

"Ernest," said Jennie, "was the only one who studied it every day, loved it, lingered in its presence, watched it at sunrise and sunset, from near and from far."

"You are right," said Miss A.; "it was loving association with the Stone Face, belief in it, that made Ernest like it. It is

'To him who, in the love of nature,  
Holds communion with her visible forms,  
She speaks a varied language.'

"Paul says that when we see Jesus we shall be like Him, but this can only be true of those who think as He thought and do as He did. The Great Stone Face was right at Ernest's home; he could see it from his own door.

"We do not need to travel long distances to see great things or to become wise or good. Washington had never traveled, and yet he sent five of the best generals of Europe back home bare of

laurels and disgraced before the world. A traveler at the source of the Nile found that

'A thousand streams of lovelier flow  
Bathed his own mountain land,  
Whence far o'er waste and ocean track  
Their wild, sweet voices called him back.'

"Dr. Bryan lectured at our Institute on the Holy Land, and he said it was at Bloomington, Indiana, where he lives, and this was right for him. Ours is here at Richmond."

We had gone slowly on from our resting place, and were now on the Doran bridge. We stopped at the railing and looked over. A prettier sky was never reflected back to happier admirers. Miss A. quoted from Whittier:

'Oh, friend, we need nor rock nor sand  
Nor storied stream of morning land;  
The heavens are glassed in Merrimack—  
What more could Jordan render back?'

"Reminds me of Riley," said James—

'Right here at home, boys—jes right where we air!—  
Birds don't sing any sweeter anywhere;  
Grass don't grow any greener 'n she grows  
Acrost the pastur' where the old path goes;  
All things in earshot 's purty, er in sight  
Right here at home, boys, ef we *size* 'em right.'

As we said good night we all expressed our regret that we could not have many more outings. Miss A., however, told us we could probably have one more, but, if the weather forbade this, we would shorten the nature lessons and take them indoors.

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Happy New Year! Happy New Year!  
If the wish were turned to trying,  
Back to its youth the world would roll  
And change to songs its sighing.

Happy New Year! the gracious words  
On a million lips are lurking;  
A jubilee year if for its joy  
A million hands were working.

Up to its gates expectant throngs  
With dear desires are pressing;  
The hand must speed, the foot be swift  
To win the New Year's blessing.

—M. F. Butts.

## READING AND ITS RELATION TO OTHER STUDIES.

LILLIAN QUICK, COLUMBUS, IND.

When I see the reading lessons so frequently given first year pupils, I think "What man is there of you, who, if his son ask him for bread will give him a stone?" It is beyond my comprehension how some teachers can begin year after year and retain their sanity with such lessons as, "A hat. I see. I see a hat," and "I see a boy. The boy has a ball," and so on *ad infinitum*, *ad nauseam*.

The lessons of our best school readers are desultory, promiscuous and unrelated to the subjects that should be taught in school. I believe that science, history or literature should form the basis of every reading lesson, and that the interest in the subject matter should tide the child over the difficulty of learning to read.

If a teacher had a printing office at her command, with all its paraphernalia including the entire force of workers, what excellent reading lessons she could have. But the millennium has not come yet, and our pupils must read. I find a hektograph invaluable in my work, and it costs but little. You have only to write the lesson once, then make as many copies as you please. When the children need the printed lessons the type-writer and mimeograph are brought into use. A friend kindly allows me the use of a type-writer and the superintendent has the mimeograph. An excellent chart can be made by using heavy paper and the rubber type forms.

I shall now take a subject and endeavor to show how reading can be taught in connection with it, making the learning of words subsidiary to the thought. I have a class of beginners and a more advanced class, several of whom were in school last year.

I begin by conversing with the children, telling them that far in the north there is a very strange country. It is so cold there that snow and ice are seen all the time, and the sun is seen only a part of the year. There are many interesting things to be seen. How many would like to "play like" we visit this interesting place?

We then play that we are preparing for the journey. As we are going north to a very cold country, what do we need to take

with us? Various answers will be given, and this calls into activity the reasoning faculties. How shall we go? We then play that we are traveling on the train, the children telling me what they see on the car and from the window. By and by we reach the ocean and see a steamer. I hastily sketch a steamer on the ocean. If you can not sketch, some other kind of a picture of the objects presented at the right time will answer very nearly as well. I leave the picture before the children for them to observe and talk about.

We then play that we are on the steamer, the interior of which must be minutely described and pictured, if possible, in order to enhance the individual concepts.

As we play that we are sailing northward, the highest section are ready to write their thoughts about where we are going, how we are traveling, and what we have already seen on the way. When the children write I do not leave them for the purpose of hearing another recitation, but I give them my entire attention. If a child can not write a word correctly, I write it on the board, erasing it before he attempts to write it. If the child is full of thought the indomitable energy that springs from a desire to express it carries him triumphantly over the tremendous obstacles in learning to spell.

When talking to the beginning class, I like to have them with me near the blackboard. While they are giving their whole attention to the subject and their interest is most intense, I write rapidly on the board some word which has just been used orally in expressing the thought. Every time I use the word I write it. Children love to imitate, and soon they want to write as the teacher does, unless prevented by fear, which feeling should be eradicated as soon as possible. Their first efforts are crude, but they are genuine expressions of thought.

I write the sentences which the children give on the blackboard, and soon they wish to do the same. After a child has completed his sentence, I say, "What have you written?" He looks at his sentence, and with the thought fresh in his mind, he can tell in a perfectly natural way what he has written. This is the beginning of our reading.

I place a new sentence on the board and ask the children what I have said. They must not attempt to read it until they have the thought and can express it easily. In their efforts to get the

thought they point out the words they do not know, and I simply pronounce them. They can soon look at me and express the thought in a perfectly natural tone. This plan is pursued until the children can study and read intelligently a very difficult lesson, and such words as "ocean," "iceberg," "Eskimo" and "reindeer" are learned as easily as "hat," "cat," "boy" and "girl." As we continue our play that we are sailing northward, we see icebergs, and the picture of them is drawn in the picture of the ocean, previously placed on the board. After we talk about icebergs, I show all the different pictures of them I can find. This subject serves as a language and a reading lesson. In our language work the children write their *own* thoughts on the blackboard. As we proceed northward, we see the animals of the polar seas, the whale, walrus, bear and seal. Each in turn is added to our picture, and serves for other lessons.

Finally, icebergs become so numerous and our way so dangerous, we decide to leave the ship and go on land. We find the country covered with snow and ice. Why? I sketch in our picture the snow-covered land. What kind of houses do you suppose the people have? Why? Here will come in a discussion of the different kinds of building material. What does the Eskimo use for a house during the short summer? The story might be told by a teacher, the children might listen and repeat the story. While doing this their minds would be active, but they can do more than this, they can be lead to reason and do more thinking by well-put questions.

The Eskimo's house looks like this (sketching one). I wonder why they build it in this shape? Can any one tell? They have no stores in which to buy anything, and they know nothing of glass-making. What can they use in their windows?

What kind of a door do they make? Why is it so small? Why build a hall over it? How do they get in? When the Eskimo enters his house, or igloo, as he calls it, he crawls on his hands and knees like this (sketch). I wonder what we shall see inside?

We talk about the bed, stove and stone dishes, how each one is made, and the wonderful patience of the Eskimo as displayed in the making of these articles. The children should be led to see that these people depend upon what their environment and their own ingenuity produce for the necessary things of life.

Speaking of the dress and the food of the Eskimos, leads to their occupation, which is hunting and fishing. Then we discuss their weapons, what they are and of what material made. The canoe, the sledge and the dogs are topics of much interest. These in turn are added to the picture. The children model with clay the blocks of which the house is built, sledge, dogs, etc.

We make a dress for a doll, and a bed-bag of fur. Harness for the dogs is cut out of chamois skin. Many other things to be made will suggest themselves to one teaching the subject. The children enjoy playing the same games the Eskimo children play.

One can not teach this subject, or any other, successfully without much preparation.

The books I have found helpful in studying this subject are ; Schwatka's Children of the Cold, Jane Andrew's Seven Little Sisters and Each and All, Encyclopedias, Geographical Readers and Congressional reports.

I do not expect the children to remember all the facts presented, but they will learn to read, and the mental discipline gained will be felt all through their lives, I hope.

Unlike a preacher, my text comes last. "All knowledge should be so taught that the act put forth by the child to acquire that knowledge will be of more benefit than the knowledge itself."

NOTE.—A reading lesson for children based on the above article will be found on the reverse side of advertising pages in this issue of the JOURNAL. These leaves can be cut out without injuring other reading matter, pasted on card-board or heavy manilla paper and used as supplementary reading. Will primary teachers please try this and report the result ?

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For ah, another year, another year,  
I'll set my life in richer, stronger soil,  
And prune the weeds away that creep too near,  
And watch and tend with never-ceasing toil—  
Another year, ah, yes, another year.

—Nora Perry.

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"I'm little January, perhaps you do not know  
How far I've come to see you, across the fields of snow;  
Perhaps you were n't expecting I'd be so very small,  
Perhaps you're almost wishing I had not come at all."

APPERCEPTION. (*Continued.*)

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CHAS. A. MCMURRY.

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In applying the notion of apperception to our school work (in ungraded and in graded schools) we are led to pay more attention to what a child has already learned. School teachers are accustomed to throw the emphasis strongly upon the *new lesson*. It is a thing to be learned by itself and simply added to what a child already knows. Just as one bushel of potatoes at a time is added to the bin, so knowledge is supposed to go into the mind one piece at a time. When a bushel of potatoes is added to the bin, it neither helps nor harms those already in store. It only increases the bulk without changing the quality. But when new knowledge properly enters the mind, there is a mixing and mingling of the old and the new. Just as sugar is taken up by water and dissolved, changing the form of the sugar and the taste of the water (inter-action) so in the process of apperception, the great body of accumulated knowledge takes up the fresh material of thought, assimilates it and is modified by it.

Learning consists chiefly in making a good use of what we already know. Most teachers have thrown the emphasis on the other side and think that learning consists in acquiring a knowledge of something entirely new.

In Plato's dialogue, Socrates appears as a great teacher. But his method of teaching is a method of questioning and of sifting out their old knowledge.

The Savior also had a similar method of teaching. Sometimes he refused to answer or to give direct instruction, but he called up some familiar illustration (as in the case of the Good Samaritan) and asked the questioner to draw his own conclusions. The unmistakable drift of all this kind of *wise teaching* is to throw the pupil back upon his own resources, to ask him to think over and make use of what he already knows. This is apperception in the true sense of the word, but it is an unusually difficult and delicate position for the teacher. Most young teachers are strongly inclined to take this position, (especially as soon as they begin to think over methods of teaching). The child asks the teacher a question and is told to think it out for himself, on the principle that a child shouldn't be told anything he can find out



for himself (an oft repeated maxim). But a thoughtful teacher soon discovers that it isn't enough to tell a pupil to find out things for himself. Socrates and Christ did not require this even of adults, why should a child be allowed to flounder helplessly for lack of helpful suggestion, when the true method, even with adults, is to guide the student with questions and suggestions?

The problem for the skillful instructor is how to link the past knowledge of the pupil with the present lesson. The pupil is not conscious that he possesses in his previous knowledge the ideas that will interpret this new lesson. But the teacher knowing the situation must lead him back to it, not by telling him again what he already knows, but by allowing him to recall these things and then consider the relation in which they stand to the new lesson. The teacher becomes a mediator between the new lesson and the pupil's previous knowledge.

In order to bring about the proper connection between what the child knows and what he is about to learn, the teacher needs to make a pretty full acquaintance with what *is already in the child's mind*, especially with whatever ideas or experiences have a close bearing on the lesson to be learned. In carrying out the principle of apperception, therefore, the teacher needs at least three things.

1. A general knowledge of children of the age he is teaching acquired through *child-study*, which is the best kind of psychology for teachers.

2. The children need to be known and appreciated individually, in their peculiarities, preferences, dispositions and ability.

3. The teacher needs to know just what previous acquisitions of the children have a direct relation to the particular lesson in hand. This the teacher must often get by direct query.

All this is preliminary to the teaching itself and outside of the lesson proper. No matter how perfectly the teacher may have mastered the lesson in all its phases and relations, unless he knows the children and what store of ideas they bring with them he cannot teach.

Looked at from the standpoint of apperception, teaching becomes a much more complex and difficult process than the simple hearing of recitations, or the holding of drills and examinations. The knowledge of the children and the knowledge of the lesson are the two great preliminaries, but the actual skill of the

teacher, the whole art of instruction, are called into full play when he assumes to guide the children as they themselves work over their old ideas in the effort to interpret the new lesson. Children can learn a lesson and recite it creditably without much teaching. But to take up an important lesson into the body of their previous experiences, and rightly assimilate it, requires skillful guidance on the part of the teacher and self-active, native thinking on the part of the children.

I am not sure but the teachers in ungraded and rural schools have a better chance to work out such a rational plan of recitation as suggested by the principle of apperception than town and city teachers. There are at least two points in favor of the ungraded schools. (1) Instruction is more individual; (2) There is less of the machine and mechanism by which a fixed quantum of knowledge is to be drilled into the children by memory processes. Teachers in ungraded schools have more freedom, if only they have the insight and energy to develop skill along rational lines.

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### READING CIRCLES OF INDIANA.

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F. A. COTTON, DEPUTY STATE SUPERINTENDENT.

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The organization, history and practical working of the teachers' and children's reading circles of Indiana are familiar to all of the school people, but the public in general know little of them; hence a brief description of these organizations may be profitable.

The Circles are managed by a board of directors, consisting of ten members. Two of these, the State superintendent of public instruction and deputy, are members, ex-officio. The other eight members are elected, two each year, for a term of four years, by the State Teachers' Association, to which body the board is directly responsible for all its acts. The board has usually been composed of men and women who were actively engaged in school work, not representing the different divisions and departments of the teaching force of the State so much as the unity and solidarity of the teaching profession. The board of directors is not an incorporated body, but its standing and character are such that it has never had any difficulty in making and in securing the enforcement of contracts involving thousands of dollars.

As indicated, the board is under the control and direction of

the State Teachers' Association, and an annual report is made to that body of the business of the Circles. The secretary keeps full minutes of the meetings of the board, and the records are regularly offered to the committee of the State Teachers' Association which is annually appointed to consider the condition of the Circles.

The chief duty of the board is to lay out courses of reading for both the teachers' and young people's circles. For the teachers' circle two books are selected each year, one on some professional line and one in the line of general culture.

The circle is organized in every township in the State. Every township organization is independent in its methods of work, and the success and profit from the work depends upon the spirit and enthusiasm of the teachers. Thus the study of the teachers in their reading course has been brought to a healthful uniformity without interfering with local or individual independence.

In the township institute outlines, prepared by the State department of public instruction, there is presented an outline or syllabus of the course, presenting suggestions and questions in the texts. With this outline as a guide and with the further direction from a competent leader in each township, the teachers usually receive great benefit from a careful and conscientious study of the courses outlined at the township institutes.

In many localities, men and women who are not teachers and young people who are preparing to teach, join the circle and follow the course of reading. The benefit to the schools and the citizens of the townships from such organized reading may be considered as invaluable.

#### THE YOUNG PEOPLE'S CIRCLE.

As far-reaching and effective as have been the results of the teachers' reading circle, still it is believed that the young people's circle has accomplished more good. After the teachers' circle had been carried on so successfully for a few years, it was suggested that the same organization might extend its work for the young people of the State. Careful teachers had observed that many of the children under their care either had no taste for the reading of good books, or had a liking for vicious books. They believed, too, that the ability to read, unless it is coupled with a taste for the best, leaves the child the victim of circumstances.

The work was undertaken with the thought that it is far better to begin early in the life of the child to lead him to discover the real treasures in books. Only the best books are selected. Among the one hundred and sixty-two thus far chosen there are included stories from mythology, stories of child life, novels, biographies, histories, travels, science, poems, dramas, and sketches—a variety of books, many of which have a direct bearing upon the special subjects pursued in the course of instruction prescribed by the State, but all of which have a higher purpose to serve, to perform the function of true art, to minister to the soul.

In many of the counties all the books of the circle, and many more, have become the property of the schools, thus forming a beginning of a school library. It is hoped that these books will form the nucleus of a library in every school district in the State. Through these libraries not only the pupils but all of the people of the districts have become interested in good books, and so the influence has been extended.

There are fifteen to twenty books placed in the young people's list each year, and are sold to the members at less than wholesale prices. The books are bought, and distributed over the State by the manager, who is employed by the board to do this work. The manager has his office in this city.

There were over 13,000 members in the teachers' and 195,000 members in the young people's circles last year.

*Indianapolis Sentinel.*

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It is somewhat difficult to state the test of a school, but I am interested, first of all, in the personality of the teacher, for I am convinced that the teacher herself is a more influential factor in the school than the studies taught.

The voice of the teacher strikes me as especially worthy of notice. If it is low in tone and used comparatively little, the indications are that both the control of the children and the instruction are excellent.

In judging the instruction itself, the first point I would notice is the interest that the children feel for the subject taught. If they are genuinely interested, they will be responsive enough to ask questions freely; to answer questions in their own language, and not in the words of the book, and in so doing they will make abundant use of their hands for gesturing. This latter point I would emphasize.

These tests will not fully cover the ground, but I think they cover it largely, at least.—*F. M. McMurtry.*

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**DEPARTMENT OF PEDAGOGY.**

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**HOW CHILDREN LEARN LANGUAGE.**

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**WM. A. MILLIS, ATTICA, INDIANA.**

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Instruction in language has always occupied first place in primary education. The psychology of the individual and of society in general shows with increasing clearness that the language studies must continue to hold their place of prominence. The question at issue must remain as heretofore, chiefly a question of method rather than a question of elevation of some other subject to first place in the course of study. For this reason the reports of students of children's language must be of great practical interest to the scientific teacher. The publications of Lukens, Tracey, Preyer, Perez, Darwin and others offer very important data for the determination of many of the vital elements of method in language. It is through the investigations of experts such as these that scientific method is approached.

The language instinct of the child is probably strongest of all his native impulses except the purely vegetative. The child is instinctively a language builder, a language inventor. Leaving out of account the influences of education and of companionship, there remains yet a deep-seated impulse that manifests itself perceptibly at different stages in the individual's life. The child instinctively labels everything. Horatio Hale gives an account of several cases in which children have invented absolutely original languages which were sufficiently complete to express all of their wants. These invented forms were persisted in until broken up by correction in school. The same instinct is seen in the babbling of infants and in the "la-la" speech of young children at play. Mr. Chrisman in a recent article has called attention anew to the phenomena of secret languages invented and used by children from the ages of eight or ten to twelve or fourteen. It is suggested that the chief difficulties of the colloquial speech have been practically mastered at about that time, and that the inventive instinct being freed by the restrictions imposed by education, buds forth again in the use of hog Latin and other forms of "secret" language. However strong this native instinct may be in itself, in the child of to-day it is re-inforced by inheritance from

a long past. Dr. Lukens has pictured the full force of heredity intensifying the native impulse. The child has behind him thousands of generations in whose lives language was an increasingly active function. Add to this the force of necessity created by fact of social dependence of the individual. Man cannot live alone. He must live by and with companions. This is impossible except through communication of thoughts, feelings and will. The success of the individual is measured by the degree in which he can make himself understood and can understand others. To realize the potency of language in the life of man, picture the condition of society which would ensue if language were entirely abolished. The child is compelled to talk. He cannot rise above the animal within him if he does not. He must be able to make himself understood. Language is a measure of social development, the yardstick by which the philologist marks off the use of civilization. It is so because it is the absolute condition of all intellectual, emotional and social advance. But the child labors also under the necessity, imposed by his own mind, which requires that he think in language forms. Dr. Lukens says that "In general, the word forms the link between the object and the memory of it. There is a remarkable mnemonic power in speech. Thought unassociated with words very soon dies away from memory. Even intense feelings, when never expressed, are soon forgotten." The content is to the form as spirit to body. Thought and feeling are evanescent if not encased in the forms of speech. While thought must precede its expression, "the idea before the word," yet, at the same time, the permanence of the idea depends upon its proper association in speech. Words are the handles by which we recall and manipulate ideas. The impulse of accumulation is strong and adds its strength to the forces that develop language. Lying back of all these is the universal impulse of self-expression, of self-revelation. Thus there are operating in the formation of language the most powerful impulses of the child's nature:—(1) The universal impulse of self-expression; (2) the muscle-using instinct; (3) the instinct of language invention; (4) the necessity of communication with companions, and (5) the instinct of accumulation and preservation of thoughts and feelings.

The potentialities of language and the instinct of language invention are native to the child. These potentialities are fully

actualized only in the presence of a companion. The element of companionship enters very considerably into the quality of language learning. Some sort of language the individual must have; its particular form will be determined by the necessities of communication created by social relations.

"Necessity is the mother of invention." This is as true of language as of machines. The ultimate motive in language activity is *the desire to be understood*. This desire is practically universal. It is the motive of the child in his communication at all times and everywhere. The intensity of the motive may be easily realized by a moment's introspection. The intense earnestness and effort of the little child to make himself understood reveals the strength of the desire, and, at the same time reveals the key to his instruction. Skill in playing upon this motive is the chief element in successful language teaching. The child must not only have something to say but he must be filled with the impulse of communication to his companions in fully intelligible forms of expression.

The tendency to invent an individual language appears to be stronger than the tendency to adopt the colloquial speech *per se*. The creative impulse is stronger than the imitative impulse except as modified by the necessity of being understood by those who use the speech to be imitated. This is observed in the little child's use of "baby" language peculiar to himself except when required to use the conventional forms. It is also observed in the universal tendency to "nickname" persons, objects and activities. As a result of this tendency, the child forms a language merely sufficiently complete and definite to make himself intelligible. He follows the line of least resistance; he is economical in his expression. The purity, fulness and accuracy of his language, his choice of words, inflection and syntax, are measured practically by what his companions accept. Fond mothers often retard the growth of their children's language by understanding them too readily. Teachers often occasion and encourage vicious habits of oral and written speech by "meeting the pupil's statement half way." In her expectancy, she accepts a hint for the statement.

A little obstinacy in comprehension secures better English than criticism—for criticism of language is too generally posthumous so far as the conditions of its effectiveness are concerned.

The same truism applies to the home. The child imitates the speech which he hears about him : he talks as he hears others talk. But there is always the other side ; he talks as others permit him to talk. In other words, parent and teacher are not only responsible for their own speech in the presence of children, but also for what speech they accept from the children. Of the two responsibilities, I am almost ready to say that the latter is greater. For while the imitative function is exceedingly influential, it applies to the general form rather than to details. It is the requirement of intelligibility which secures imitation of particulars. The child naturally conforms to the general character of the colloquial speech, but he must be made to conform to the details by the conditions imposed by companions. The child must hear model English if he is ever to speak it, but this alone is not sufficient. He must be forced to full imitation by pressure from without and above. Environment has directly and indirectly almost all to do with the child's speech. Heredity will not preserve him from its influence. " If brought up among savages, he will speak their language ; if among wolves, he will howl." Parents and teachers must remember that the child gets more than vocabulary and syntax from them ; that their enunciation, articulation, quality of voice, choice of words, and dignity and grace of expression are more faithfully reproduced than syntax and vocabulary. Syntax and vocabulary depend upon the exigencies of being understood, in other words, upon conscious imitation ; the other elements of speech, enunciation, choice of words, quality of voice, etc., depend upon the unconscious imitation which always occurs in social contact. Of course, organic defects are left out of account in this connection.

One of the most significant ideas advanced by recent investigators is that relating to the basis of language learning. It now appears that the oral word is the primary center in all language functioning ; that is, that all linguistic activity, motor and sensory, is on the motor-word basis. The motor image is the coin of ultimate redemption. The link between memory and the object is the motor word rather than the auditory, written, or visual word. In time the four images become fused into a unit, but, the motor word even then remains the basic element upon which the other elements rest. "The word, as visual symbol, auditory image, spoken word and written word, afterward becomes one unit, a



complex that must and should fuse into one whole, with the motor elements as the handles for voluntary control." (Lukens) Memory is fundamentally a motor process, and since language learning is a voluntary activity, and since the motor speech function is the only one within the field of oral language which can possibly be under the control of the will, it is evident that the original association of word and idea is the association of the idea with the motor word image. This position is borne out by the latest results of physiology. The spoken word and auditory word centers in the brain show the best development, with the visual and written word centers appearing next in the order given. "In the brain of the human embryo the first infolding of the cortex to make the first beginning of fissures and convolutions occurs at the Island of Reil, thus pointing to that region as the oldest and therefore the best organized area of the cerebrum." These fissures are recognized as the centers of the oral and auditory functions. These two functions are pretty thoroughly fused into a unit, yet the psychology of memory demonstrates the primary nature of the motor function. The interconnections of the motor word and auditory centers are also the best developed. The connections between the spoken word and visual centers, and between the visual and written word centers, are developed in the order named. Thus it appears that in the process of learning new words the immediate association is made between the idea and the motor word image, and secondarily between the auditory and motor word images, the visual and motor word images, and the written and visual word images.

In this connection an excerpt from Dr. Lukens's Preliminary Report on Learning of Languages will be of interest. Speaking of the motor basis of speech he says: "The tendency to acknowledge the leading part played by the spoken or heard word images in internal speech is greater now than formerly. I do not suppose that any one who has really studied the problem would deny its prominence. Hughlings-Jackson, Bain, Ferrier, Ireland, Elliot, Bastian, Lichtheim and Stricker have laid especial stress on it. Since the motor cells, motor nerves and muscles are the only means of the will we know of, it is only to be supposed that a voluntary silent recalling of a word is motor (*i. e.*, a "re-calling," the word implies). In this sense may we not say with Stricker that all men are motiles? In internal speech the motor images

are always normally under control, and can be repeated at will as often as we please, even in case of pronounced auditory or visual type. The auditory and visual images (probably called up by the motor any way) are, on the contrary, mostly mere flitting phantoms that sometimes overpower us, sometimes refuse absolutely to come at our bidding, and at best are never as amenable to the will as are the motor impulses. The sensory word images, when they come apparently without the motor, are of the nature of hallucinations. Some of the most often quoted cases are taken from the insane asylums. And in the normal individuals, even when the visual picture of the printed page is clear before the mind's eye, the eye gets no meaning from it till it *reads off* what it sees, and this reading off is motor. \* \* \* When the little child learns to read, can he therefore be made to associate at will the meaning with the visual word image, or is some other path made necessary by the circumstances we have just been considering? When the child sees a new visual symbol, he must be *told* what it means, or it must be suggested to him in some way, so that he shall call up that meaning in his mind. If the only handles for ideas that we have by which to call them up are the motor word images, then the advocates of early silent reading are wrong." The oral element must be dominant. This statement is of special concern to the primary teacher of reading, emphasizing as it does the necessary prominence of the motor word image in the learning of the written word, and the necessity of much oral reading on the part of the pupils. It suggests that the child learns to read most readily by "reading aloud," and that "moving the lips" in reading is instinctive and is really helpful rather than detrimental in the case of the beginner. It is established that the written word to be presented must be one used orally by the pupils, and, that the best preparation for its presentation is its use under the stress of intense interest by the pupil in oral expression. It is also quite sure that the oral element in the pupil's work must be quite as large as in the teacher's. Children should talk as they work as largely as "order" will permit. The silent scheme is dead in more ways than one. The old-fashioned "loud" scheme of our fathers was not altogether "unscientific." "Loud" study is certainly psychological in the child's beginning. "Silent" study should be approached gradually but surely. And may not the quite large abandonment of oral spelling lose in final results?

It is also suggested, that correction of oral errors is more effective than correction of written errors. The written page is in a very real sense not a part of the child as is his oral speech. It does not attach itself to him in the same ways. The written page is more impersonal. Correction of its syntax appeals to him very much as correction of any other external thing; he does not *feel* the personal relation. On the other hand, oral speech is a part of him. The personal element is prominent. Any correction of it he feels as appertaining to himself. Under such circumstances the criticism "goes home" to him. Besides, the correction generally is made when the language is yet warm, throbbing with the speaker's purpose and impulse, thereby functioning under the most favorable conditions.

Various students of child psychology have made analysis of the vocabularies of children. Those made by Dr. Tracey, show that the ratio of verb-learning of children under three years of age is about twice as great as the ratio of noun-learning. This means that, comparing the number of verbs and nouns learned to the number of each in the adult vocabulary, the child learns verbs about twice as fast as nouns. My boy used three hundred words when twenty-one months old, of these  $56\frac{1}{3}\%$  were nouns, and  $23\frac{2}{3}\%$  verbs. In the adult vocabulary, the nouns constitute 60% of the whole and the verbs 11%. Thus the ratio of the nouns of the boy's vocabulary to the adult's was .938 and the verb ratio 2.15. Dr. Tracey arrived at practically the same results in his investigations referred to above. In speaking of these he says, "The child learns action words more readily than object-words; and words descriptive of actions (adverbs) more readily than words descriptive of objects (adjectives). \* \* \* In the second place this fact confirms the Froebelian principle, on which child education is coming more and more to be based, viz.; that education proceeds most naturally (and, therefore, most easily and rapidly) along the line of motor activity. The child could not be as much the receptacle of instruction, as the agent of investigation. Let him do things, and by doing he will learn more readily."

Children exhibit nascent periods for learning language. The first period is from about the sixth to the twelfth month. Then follows a decrease in the rate of language growth during the period of learning to walk. The second period begins about two

and continues for two or three years. From three to four is also the nascent period for music. The third period extends from about eight to fourteen, the period of "secret" language, and is certainly the nascent period for fixing inflections, and for the study of Latin and other secondary languages. It is the period for fixing literary style. The most skillful teachers of English are needed in the grades from five to eight inclusive. History of language teaching confirms the psychological view that the four years spent in the grammar grades are worth more for Latin, German, French, etc., than the same number of years in the high school or college.

The tendency to rely upon acting for the expression of thought is quite strong in children. This tendency is too commonly encouraged by the carelessness of teachers and parents, and the use of proper language forms is thereby retarded. The child tends to clip his sentences, to omit or slur over essential elements, and make up the deficiencies of syntax and inflection by gesture and facial expression. If the parent is willing to understand this species of communication the child readily makes its habitual. Nothing but refusal to understand anything but full and clear sentences will bring the child up to standard speech. Children frequently clip the final syllable, or final consonants, from words if permitted by the mother and will persist in the habit for years. I know a young man twenty-five years old who habitually clips his words unless the listener refuses to accept his speech, in which event he can speak as distinctly as the normal individual.

Parents and teachers are often responsible for the child's persistent use of wrong words by failure to discriminate the true import of the little one's questions. In this manner the child comes to apply the word "hen" to all poultry, "papa" to all men, etc. This error is sure to occur if the child is given the particular when he asks for the general. A little boy saw a fish for the first time and upon the usual query was told that it was "salmon". After that all fish were "salmon". Most errors in choice of words are due to this variety of carelessness.

The foregoing may be summarized as follows :

1. The ultimate basis of language activities is the association of the motor word image with the object of thought.
2. The child instinctively creates language, but not necessarily the one he hears. He does this only when under the stress of social relations.

3. The motive in language activity is the desire to be understood. The control of language learning is secured by directing this motive.

4. Language learning proceeds most naturally along lines of motor activity.

5. The years from eight to fourteen constitute the nascent period for learning secondary languages, and for development of proper form in colloquial speech.

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## PRIMARY DEPARTMENT.

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the Anderson Schools.*

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### A CHILD THAT WAS BORN "SHORT."

Every one who has read William Hawley Smith's "Walks and Talks Abroad" remembers the chapter on being born "short," and the position he takes in that paper.

The following account of a boy, Sylvanus, is taken from the report of Dr. Richards, of the famous school of Dr. Howe in Boston. Certainly there are very few persons to whom everything is so nearly a blank as to this boy, Sylvanus, and the story of his education ought to be an inspiration to every teacher. This is a part of the report.

One of the most trying cases that I ever had to deal with was in my early experience. It was a boy about eight and a half years old. He had never known his mother, so she told me. She had never seen a smile upon his face. His father had tried to send a light from some shining object into his eyes and he had never blinked but once. He had not the power of locomotion; his lower limbs were paralyzed. Not even the sense of pain or the sense of touch did he have. This boy I found dressed in a flannel gown, lying upon the floor. He could not even roll over; he could do nothing. There are a great many others as bad as he, but let us see what we did with him.

I took the boy with me with the greatest care to the institution and dealt with him as with a babe. He was held in arms, rubbed, manipulated, worked upon to see if we could arouse the energy of his body. He was properly bathed and exercised, and everything

possible done to develop him. After a month's careful study of the case, I made up my mind that I must get down to him. Get down upon the floor, get down where the child is, right down there. If he knows anything, it is down there. You must take hold of the slightest thing in your favor. Day after day, for an hour at a time, for three months, I took a book and read aloud to that boy—intelligently, as if he understood every word I said, adapting the intonations as if I were reading to an intelligent person. When mothers talk to their little babes, telling them little "goo-goo" stories, what is the effect? The bright child wakes up by and by to this pleasant voice in the ear. And so it might be with this unfortunate boy here. And so it was. He finally heard this voice that was ringing around him in a musical tone month after month, and one day when I came and simply sat in a chair and read to myself, I looked to one side to see if he missed me, and the child actually appeared uneasy. Imagining that he missed me, I lay down on the floor beside him as usual saying, "Oh, you want me, Sylvanus? Well, I am here." He breathed a soft "Ah." I had planted the first want. He wanted me and he wanted me there. He had felt my influence there. I was too far off in the chair. So I read to him two or three months more. Then, instead of reading aloud, I read to myself one day. After a long time, I saw he was trying to do something. I watched him. Gradually he lifted his finger and laid it on my lips. "Oh, you want me to read to you, do you?" And so I read. Another want had been implanted. I read to him every day, letting him always have the privilege of opening my lips. At last he smiled—the first smile of recognition that ever came over that unfortunate child's features. It was enough to pay me ten thousand times over for all I had done for him. "If we can redeem one," I said to Dr. Howe, "we will redeem them all over the country. We will open the door so wide that every state shall pass an act to found an institute for these unfortunates, and every intelligent being shall feel that it is a privilege to enter into this great work."

This boy, step by step, went on. Finally, I could take him up and have him where I pleased. He was near me, we were one. He felt it and I knew it. He was glad to be taken up. The training went on until one day I found he could move his limbs. I put him on his hands and knees to teach him to creep. This was nearly a year and a half after he came into the institu-

tion. As I placed him there, I said, "I wonder if I can help him to talk." He had not talked any. I said to him, "Now move this hand; that is right. Now the other, that is a good boy; now this leg, that is right, now the other, that is a good boy," guiding them as I spoke. I did this every day for months, till finally, I found he was trying to do it himself between the drills. After a while I thought I saw his lips moving as he did it. Putting down my ear very close, I found he was talking. He was whispering to himself, "Now move this hand, that is right. Now the other, that is a good boy. Now move this leg, that is right. Now the other, that is a good boy." He had heard me talk in such a way, and it aroused him to talk.

We went on. Object lessons came in. He must go down to the shoemakers every day to see the shoemaker make him a pair of shoes. "What are these, Sylvanus?" we would ask, and he would say "shoes." "Who made them?" "Shoemaker." "What is this?" "Bread." "Who made it?" "Betsey" (the girl). And so the object lessons had a connection in his mind. One day I showed him an apple. "What is that?" "Apple." He had picked them up on the ground: "Who made it?" "Don't know." "Didn't the shoemaker?" "No." "Didn't Betsey?" "No." It was time to give him another lesson.

I took him up stairs one morning to an east window, to see the sun rise. "What is that, Sylvanus? Say sun." "Sun," he repeated. "Who made it, Sylvanus? Say God." "God," he repeated. I left him there and went down stairs. When breakfast was ready I sent the nurse for him. When I came to the school-room, there was this little boy. He had crept up to the window and was talking to another boy. "What is that, Charley? Say sun, Charley." "Who made it? Say God, Charley." Calling up one child after another, and going through his brief lesson,— "What is that? Say sun. Who made it? Say God." He was the best teacher I ever had.

That is the way; you must take the class before you, and not ways thrust yourself in. Some days after, in my object lessons, I took up the apple. "Who made it?" I asked of the children. All were silent but Sylvanus. He looked up as if he had a thought. "What do you think, Sylvanus?" I asked. "God" is the reply. He made the connection. Remember, this was a little child who, when eight and a half years old, lay upon the floor, and could not recognize a thing about him.

One day Sylvanus saw a mother come in and take up another child and try a jacket on him. Sylvanus looked up in my face and asked, "Have I a mother?" He wanted a mother. Yes, we all want mothers; and this little boy wanted one too. I told him he had a mother. He said that he wanted to see her. So she came one day; and when she came into the room, she looked all around, and said "Where is Sylvanus?" When he heard his name, he answered, "Here I am: is that my mother? Oh mother, I am so glad to see you." And there was joy in heaven over one soul that was redeemed.

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### ST. VALENTINE BUSY WORK.

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This room of little first year children, had been working for two or three weeks getting ready for St. Valentine's day. They had prepared a great many valentines, and on this particular afternoon, these were to be distributed.

The busy work during this intervening time had been on hearts, hands, booklets, and envelopes. By use of the hectograph, the teacher had outlined hearts and hands three and four inches long which the children cut out with scissors. The teacher put a spray of blue forget-me-nots with green leaves on the board, and with the colored pencils, the children did the same on the hearts, and these words with colored pencils were printed or written irregularly below—

"With this little heart of mine,  
I send to you a valentine."

Sometimes two hearts were tied together with the tiniest pink or blue bow of baby ribbon. The teacher furnished the ribbon but the children made the tiny holes and tied the bows.

The little paper hands and some pretty colored baby ribbon put through small perforations across the wrist, and on these hands were also printed or written with a colored pencil,—

"With this little hand of mine,  
I send to you a valentine."

Sometimes there was a tiny spray of forget-me-nots on the hand or across the wrist.

The little booklets had a spray of some kind on the outer leaf and a heart or hand sewed or drawn on the one inside. The two leaves were tied together in two places with a bit of bright cord



or ribbon. Rulers had been used to get the books just right, and to make sure that the holes through which the cords were put, were exactly the same distance from the back, and the same from top and bottom.

The work would have been more artistic probably, if the children had used water colors. But these have not been given to the pupils, so colored pencils were used instead.

On the afternoon of St. Valentine's day the box was opened. Each child had put one valentine in the box addressed to his own mother, and one to any other child to whom he wished to send some little memento. Those children who would otherwise not have received anything, were provided for by the teacher out of the stock of hands and hearts and booklets that the children had made in the mean time and were not already addressed to some one. It is needless to add that the pleasure derived from the St. Valentine part of the afternoon was not greater than the pleasure the children had derived from making their own little valentines.

It seems unnecessary to note at any length some of the valuable features connected with this particular observance of St. Valentine's day. The children understood just as clearly as children usually understand this particular holiday, and in addition had felt a personal interest in their particular celebration because of the fact that all the valentines and many of the envelopes they had themselves made during the school hours. It is also unnecessary to speak to any primary teacher of the value of the work with the hands in connection with the other school work. These children had used rulers and scissors and colored pencils in the most careful and exact way. No piece of work when done was allowed to show any finger marks, poor cutting with scissors, or dauby work with the pencils. If a child could not do this work at his first attempt, he was given another trial until the little article which he had made was perfectly clean and accurate.

The time has gone by when it is necessary to explain and to urge upon primary teachers the exceedingly high value of the work with the eyes and hands as reinforcing the other work of the school. It is just as unnecessary to say this, that the children find their greatest interest in all kinds of holidays and amusements that have a meaning to them outside of school work. The good primary teacher is the one who takes advantage of all these things and weaves them into the different phases of the work in school.

GRUBE METHOD—PRO AND CON.

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The "Grube Method" of teaching number, brought with it some of the best notions of education that had, before its time, found their way into other phases of school work. First, it insists that children shall work with objects, that the meaningless work with figures is not truly educative work. Second, it insists that the child shall deal first with the smallest numbers, beginning with 1 and 2. Third, it says the child shall master all the possible relations in each of these numbers, that he is able to comprehend. Fourth, it insists that all four of the fundamental processes shall be taught with each number from the beginning.

These four are the ideas of number work that are usually in mind when it is spoken of as the "Grube Method."

It is not the purpose at this time to speak of the favorable features of this way of considering the number work. That it has many, is gladly conceded. But let us look at the other side.

In regard to the first idea, that children should see their number in connection with objects, very few will object. But there is also this idea, that the true idea of number involves measurement, and while in 6 apples the child sees 2 three apples, he should also see some of the exact units of measure that are everywhere used. That is, the child should work with the foot, the inch, the yard and the rod; the pint and gallon; dollars and cents and other units. These are units of measure that have a value in this outer world of society in which the child finds his larger self. So while a certain amount of time should be spent on seeing such measurements, as there are 2 three apples in 6 apples, by far the greater amount of time should be spent in seeing similar relations that have a practical value outside of the school room. The child can see there are 2 three inches in a 6 inch line; 3 four inches in a 12 inch line; 2 pints in 1 quart; 9 square feet in a square yard; and 27 cubic inches in a pile of blocks 3 inches each way. This does not mean that measurements using all sorts of common objects should not be used, but that they have been too exclusively used.

The second idea stated is, that the child should deal first with the smallest numbers beginning with 1 and 2 and probably reaching as high as 10 (or a little beyond) the first year of school.

In so far as this means the children should have a rather definite comprehension of the number involved, possibly no one will dispute. But this is an observed fact that children deal with numbers much higher than 10 before coming to school at all, if they have associated freely with their parents and other children. Not long ago, I saw a little four year-old girl with ten little balls made out of tin foil. She wished more balls, so she unrolled the balls successfully and tore each in two until she had eighteen. She played with these adding and subtracting and, in all, doing as difficult work as we usually require of a second grade.

So, it seems to me very doubtful indeed if the number work should begin with 1 or 2 and just as doubtful, if it is a wise thing to limit the first year's work to 10.

In the third place, the Grube method insists that a child shall be taught all the relations he can comprehend. It is hardly necessary to add that this idea of education is not carried out in any other single line. In the child's early life, he is not compelled to interpret to his fullest limit all that "mother" means to him, before being allowed to consider the idea or person of his "father." In school, he is not forced in learning to spell home, to learn all the changes this word has gone through in Old English, Anglo-Saxon, Danish, Old High German, Dutch, etc., before it reached its present form. It may be insisted that these relations are outside the child's comprehension. But if there were only ten words to be taught during the year—nearly a month to each—certainly the child could get a great deal of the history of civilization out of these few words. This may be extreme, but the point is this; such an idea of teaching is not held in a single other line, and again, people do not think things that way.

In regard to the fourth point, *i. e.* that all four of the fundamental processes shall be taught with each number from the beginning, I believe this to be true:—that processes with objects may be just as mechanical as processes with figures. When the child goes through these different processes by placing his blocks as the teacher tells him, it is very frequently a lifeless, mechanical thing. Every thoughtful primary teacher says this is true. When the child feels no need in any way of the thing done, the work is pretty likely to be nearly as bad as the manipulation of figures. With the essential idea in this fourth point, probably most people will agree. But when we think of considering the

number 4 as to the additions, subtractions, multiplications and divisions in it, taking these in the same way, same order, same blocks, same formula, there is certainly a "grind" about it that is not in harmony with the best notions of education.

As to just what notion of primary number work should obtain, I am sure I cannot say, but this problem is certainly worthy the most careful consideration of every primary teacher.

### AN EXERCISE IN NUMBER.

"Let us make the top of a table that is 6 feet long and 2 feet wide. Let us make it with our rulers and allow one inch for each foot."

These were the directions given to a second grade class, and in a very short time each child had a figure exactly  $2 \times 6$  inches by actual measurement with the ruler. If one was found that was not exactly right, he was shown where it was wrong and he drew another.

The following indicates the work based upon the figure :—

Make the lines showing the square feet on the top of the table.

Put your finger on one square foot.

How many square feet in one row down the long way of the table?

How many rows of square feet are there?

How many square feet in the top of the table?

I wish to cover the table with velvet. If the velvet is 2 feet wide, how many yards will it take?

How much will this cost at 50 cts. a yard?

If velvet were only 1 foot wide, how many yards will it take?

How much will this cost at 50 cts. a yard?

How much fringe will it take to go entirely around this velvet cover?

How much will this fringe cost at 5 cts. a foot?

How many yards of fringe will it take?

How much will the fringe cost at 15 cts. a yard?

(This they counted by tens, resolving the 15 in 10 and 5.)

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Yet a few days, and those which now appear  
In youth and beauty like the blooming year,  
In life's swift scene shall change.

—Dryden.

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## LEND A HAND.

(This department is conducted by Mrs. E. E. Olcott.)

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*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

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### SOME GEMS OF THOUGHT.

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"A Happy New Year" to you one and all! A glad, hopeful, helpful New Year, which you go forth to meet, full of good cheer, good courage and good resolutions.

We hang mottoes upon the wall and write them upon the blackboard for the pupils, hoping the gems may be woven into the thought and gleam in the lives of the children.

Why not copy for ourselves wise sayings, words of warning, words that comfort, strengthen or inspire? Why not write them in large letters upon tinted cards, and from day to day, place one or another upon the desk where the eye may rest upon it as upon a flower? Half unconsciously, the bits of wisdom would be absorbed and become a part of the mental and spiritual being, just as sunshine is absorbed by the body. I give you for the New Year some gems that have been as faithful friends to me. Each of you can from her general reading gather such "friends" for herself for oft time what is a flashing gem to one is lustreless to another, so different are our needs

"The heart *must* leap kindly back to kindness."

"Soft words are hard arguments."

"Do to-day thy nearest duty."

"'Tis always morning somewhere in the world."

"One pound of learning requires ten pounds of common sense to apply it."—*Persian Proverb.*

"To bear is to conquer our fate."

"The best statesmanship—self-government."

"Trials do not weaken us. They only show us that we are weak."

"Our motive power is always found in what we lack."

"Trying is so far ahead of not trying that a real failure is almost excusable."

"Expect the doors of usefulness to open to you as you come to

them through desire and preparation. Help others as you grow and you will grow as you help others."

"Can a man or woman choose duties? No more than they can choose their birthplace or their father or mother."—*George Eliot*.

"Scan difficulties closely to see what may be overcome, what mitigated and what must be borne."

"She was a pupil who took instruction very slowly, she seemed to have two left hands and no head."

"Nothing is easier than to find a reason for the unpleasant in ourselves in causes outside of ourselves."—*Elizabeth Stuart Phelps Ward*.

Our confidential friends have not so much to do in shaping our lives as the thoughts which we harbor."

"To be *just*, which we never knowingly failed to be, and at the same time to feel for the unworthy, to deal kindly with the erring—it is a double grace that hangs not always in easy reach of the tallest."

"To be sincere, to be gentle and just and helpful to others, to spend time in learning only the things that are worth knowing—this was the goal she strove to reach."

"Run if you like, but try to keep your breath ;  
Work like a man, but don't be worked to death."

—*Oliver Wendell Holmes*.

"Be useful where thou livest, that they may  
Both want and wish thy pleasing presence still ;  
Kindness, good parts, great places, are the way  
To compass this. Find out men's want and will,  
And meet them there. All worldly joys go less  
To the one joy of doing kindnesses."

—*George Herbert*.

All are not just because they do no wrong ;  
But he who will not wrong me when he may,  
He is the truly just. I praise not those,  
Who in their petty dealings pilfer not,  
But him, whose conscience spurns at secret fraud,  
When he might plunder and defy surprise.  
His be the praise who, looking down with scorn  
On the false judgment of the partial herd,  
Consults his own clear heart, and boldly dares  
To be, not to be *thought* an honest man.

[*In a Magazine published in 1830.*]

## DESK-WORK—A CUT-UP POEM.

So many teachers have shown interest in the making of busy-work material by means of a hectograph, that I give the following detailed suggestions, which are intended to be modified and adapted by each teacher, to suit the needs of her pupils. In many district schools, the poem, "Little Mr. By-and-by" which appeared in the St. Nicholas, may be used in the first, second and third grades. If even the fourth grade should like to "build" the poem, why should'nt they?

The lines indicating where the words are to be cut from each other, were drawn so that trusty pupils may have the pleasure of helping the teacher by "slicing" the hectographed copies of the poem. Make more than twice as many copies as there are pupils in the class.

At first, give an uncut copy with the sliced one. This will save time and space on the blackboard, and relieve the strain on the pupils' eyes. The boxes or envelopes containing the cut-up copies should be numbered. Each word should bear on the reverse side the same number as the box in which it belongs. Words will certainly be dropped on the floor, and it will be a very great convenience to know, at once, in which box to put the truant. Some words will be lost or spoiled, make good the loss by cutting from the extra copies the words that are needed. All the numbering may be done by careful pupils. The fourth and fifth grades will consider it a privilege to "lend a hand," and will place neat, distinct figures on the cut-up pieces. The cardboard should be heavy enough to stand wear; white is the least desirable because it soils so easily.

First teach the poem as a memory gem. It may be mastered in a short time by devoting three or four minutes to it each morning. To the skillful teacher it is full of ethical suggestions. Mr. By-and-by invades every school-room. Kindly make, at opportune moments, such remarks as "I fear that Mr. By-and-by is here; I wish he would go back to the mountains of the moon." "Susan Slow and her brother will spoil our lesson if we are not watchful."

When the pupils have the poem fairly well committed, give them both the cut-up and the uncut copy, and let them try to "build" it. Memory and comparison with the copy will help them in deciding what the unfamiliar words are. For a while

only one stanza may be assigned, so that the slow pupils may have the satisfaction of accomplishing their task, while the quicker classmates may complete two stanzas, and thus all be employed. Encourage them to try to build without referring to the uncut copies; and, after a time, test their ability to do so by not giving those out.

It will be some time before even the majority of the class can, from memory, place the whole poem (punctuations marks included) correctly and evenly on their desks. In the meantime, the work may be varied by building such sentences as, "By-and-by loiters on the way," "He's fretful if he's asked to come or go," "Mr. By-and-by is cousin to Don't Care."

The first-reader class may begin by finding the words, "Little Mr. By-and-by" three times. They can select and place in columns words which they have already learned, such as "play," "way," "cry," "by," "go," "will," etc. They can build simple sentences, as "I like you," "I like play," "I know Mr. By-and-by," "I knew his sister." A number lesson may be correlated with the language phase, by placing in separate columns, words of two, three or more letters.

	LITTLE	MR.	BY-AND-BY	
	Little	Mr.	By-and-by	, ,
	You	will	know	him by his cry , ,
	And	the	way	he loiters when
	Called	again	and	yet again , ,
	Glum	if	he	must leave his play
	Though	all	time	be holiday .
	Little	Mr.	By-and-by	, ,
	Eyes	cast	down	and mouth awry .
	In	the	mountains	of the moon
	He	is	known	as pretty soon ;
	And	he's	cousin	to Don't Care ,
	As	no	doubt	you're well aware .
	Little	Mr.	By-and-by	
	Always	has	a	fretful "Why?"
	When	he's	asked	to come or go , ,
	Like	his	sister-	-Susan Slow ;
	Hope	we'll	never	-you nor I-
	Be	like	Mr.	By-and-by .



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RED RIBBON DAY.

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Among the devices for promoting regularity in attendance, Red Ribbon Day has few rivals in excellence. Red Ribbon Day is the first Monday in each "school" month. On that day, in each building, all pupils, from the lowest grade to the highest, who have been neither tardy nor absent during the previous month, assemble in the principal's room. Upon each, a knot of red ribbon is pinned as a recognition of his good record.

The number of "red ribbons" is recorded, and compared with the number received at the close of the previous months. If it is greater, there is a feeling of satisfaction, but if, from sickness or inclement weather, it is less, regret is very evident. Each grade contributes a song, declamation, or select reading to the brief program. Sometimes, one of the teachers adds a story. Then with smiling faces the pupils file back to their respective rooms. When school closes in the afternoon, the teacher takes charge of the ribbons, for they are worn only one day. But on the last day of school, the pupils who receive red ribbons keep them, and this serves as a special incentive to good attendance during the last month.

Pupils who have worn the red ribbon every month, receive, on the day school closes, an Honor Card, which is signed by the superintendent and teacher, and states that the recipient has been neither absent nor tardy during the whole year. These cards are highly prized, and some pupils have been so fortunate as to receive them three or four years in succession.

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"I bring you, friends, what the years have brought  
Since ever man toiled, aspired or thought.  
Days for labor and nights for rest,  
And I bring you Love, a heaven-born guest ;  
Space to work in and work to do,  
And faith in that which is pure and true.  
Hold me in honor and greet me dear,  
And sooth, you'll find me a happy New Year."

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"There's a new foot on the floor, my friend,  
And a new face at the door, my friend.  
But well I know  
That unto him who works and feels he works  
This same grand year is ever at the doors.

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## EDITORIAL.

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- "The Old Year laid upon the portals of the past  
A trembling hand,  
And said, 'Oh, let me die and be at rest  
Within thy misty land !'  
Then all the years that lived and died before  
Reached forth and drew the wanderer safe within the door.
- "The New Year laid upon the portals of To-day  
A firm young hand,  
And said, 'Oh, let me come and live and work  
Within thy shining land !'  
Then all the years that are to be replied,  
'This is your world,' and drew the youth inside."
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### COMPULSORY EDUCATION.

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There was never before so strong a feeling in this State in favor of a compulsory education law, and if all signs do not fail such a law will be passed at the coming session of the legislature. This feeling has been growing from year to year till it is now practically universal. The sentiment is that if the State taxes itself and provides free schools for all, as a means of self-preservation, then the very persons for whom the free schools are specially intended shall not be allowed to grow up in ignorance, a menace to society.

The word "compulsory" sounds a little harsh and scares some people, but when rightly understood is not objectionable. The principle of it is already in force on one side of the question :—the tax payer is *compelled* to pay his taxes in order to support the schools whether he wishes or not, even when he has no children to send to school. If he objects he is told that he *must* pay so that the children of his poor neighbors may have an education, that by so doing he is adding security and value to both life and property in the entire commonwealth, and that he as an individual will share the good results.

Under such circumstances, has not such a tax payer the right to say, "You have *compelled* me to pay for the schools, now I demand that you *compel* these children to avail themselves of the privilege offered, so that I may have the promised security and protection."

Horace Mann once said in referring to the rights of parents: "To rear a child in ignorance and vice is not one of the inalienable rights."

Such a law needs to be drawn with a great deal of care but it is not the purpose of this article to discuss details. When the general principle is admitted, the details can easily be adjusted, if not at once, after trial and experience.

Most of the northern states have compulsory laws and the uniform testimony is that such a law is comparatively worthless unless it provides for a "truant officer." We do not need to experiment along lines that others have already tried and settled.

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THE CURFEW LAW.

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A "Curfew Law" is being urged in many localities and deserves serious attention. The law is the outgrowth of an old English law.

William the Conqueror, established the "Couvir Fen" (cover the fire) to prevent conspiracies against his throne. When the "Curfew Bell" was sounded, all people were compelled to be off the streets and "cover their fires."

The "Curfew Law" now means that children under a given age, must be off the streets by a certain hour in the evening. Of course this law is for cities only, and its purpose is to protect children from the bad influences of the streets after night. Everybody familiar with the facts knows, that thousands of boys and girls get their start in a bad life, by being allowed to run the streets at night.

Mrs. John D. Townsend in a recent article in the North American Review, discusses the necessity of a curfew for children in cities. She quotes from the report of the State Board of Charities for New Jersey to the effect, that in eleven cities 13,000 policemen arrested 450,000 men, women and children at an expense of \$20,000,000, while among an equal number of farmers there were not 5,000 arrests. Of the 13,000 boys and girls in reform schools in 1890, 98 per cent. went from cities, towns and villages. This means that a little more than one-third of the population of the country furnished 98 of every 100 children sent to reform schools.

In view of such facts as these, the sincere men and women who are urging curfew ordinances for cities deserve to be met with something better than ridicule. There can be no doubt that the lack of parental watchfulness and restraint in cities is responsible for much of the crime which fills reformatories and prisons with convicts. This being the case, it seems that a remedy should be devised for the evil.

This law should go along with a compulsory education law, but can be enforced independently. City councils can make and enforce such a law without any special legislation, and as a matter of fact four or five Indiana towns already have the curfew in force. A State law, however, would greatly strengthen the local legislation and help to stiffen the backbone of timid councilmen.

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A NEW PLAN TRIED IN WEST INDIANAPOLIS.

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Superintendent Martin, of the West Indianapolis schools, recently held the first of a series of meetings between school teachers and parents. His object is to get parents more interested in the schools and better acquainted with the teachers, and thus to lessen the chances of friction. The meeting was held in school No. 1, the teachers in that building consulting with the parents of children attending this school. Papers were read on school work by the teachers, and parents were called upon for remarks. There were forty visitors; some of them were complimentary in their references to the schools, while others spoke plainly of things to which they desired to draw the attention of the teachers. Superintendent Martin urged more fre-

quent visiting of the schools by the parents. At the next meeting, the parents are to take the lead with papers on school children and school work, and teachers will discuss the papers. Similar meetings will be held at school buildings Nos. 2, 3 and 4.

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### SCHOOL LEGISLATION.

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The Legislative Committee of the State Teachers' Association met at the office of the Superintendent of Public Instruction December 11, and agreed upon the recommendations that are to be made to the General Assembly. There were present D. M. Geeting, David K. Goss, J. N. Study, R. I. Hamilton, and State Senators La Follette, McCord and Ellison. The committee agreed to the recommendations suggested by the Superintendent of Public Instruction, which are as follows :

First. That a law be enacted making it the duty of township trustees and the trustees of town and city schools to furnish high school accommodations, free, to all graduates from the common school branches.

Second. That a law be enacted making it the duty of the Superintendent of Public Instruction to examine all teachers for license to teach in the public schools of the State, thereby making the license valid in any part of the State, instead of in one county, as at present.

Third. That there be a law enacted providing for the qualification of county and city superintendents.

Fourth. That a law be passed enlarging the work of the State Library Board, whereby a district library system may be established, extending the privilege of reading good books to children in our country, village and town schools.

Fifth. That the State Board of Education be authorized to recognize State certificates issued in other States.

There will be another meeting of the committee December 29, to take final action on the recommendations. The bill under consideration does not provide for a compulsory education law, for the reason that an influential member of the House has already prepared such a bill, which he will introduce at the beginning of the session. The State Superintendent says he is in favor of the proposed compulsory law.

Nearly all the county associations so far held have adopted resolutions endorsing the amendment suggested by State Superintendent Geeting.

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REMEMBER, O remember, that January 1 was the limit for time subscribers to the JOURNAL. More than *two thousand* teachers agreed to pay their subscriptions *not later than January 1, 1897*. Suppose, as was true last year, that more than *one thousand* forget this promise. Do you see what it means to the editor, who must pay his bills on time? Did you ever hear of the "Golden Rule?"

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IN SENDING pay for the JOURNAL, please name the agent with whom you subscribed.

SPECIAL attention is called to the article of Miss Lillian Quick, found on another page. In it she describes, with much minuteness, her method of teaching reading. All will agree that her method is rational and full of helpful suggestions. Miss Quick has prepared some reading lessons based on the thought of the article. They have been put in large type and placed on the back of advertising pages so that they may be cut out without marring the reading matter. It is suggested that these lessons be cut into paragraphs and pasted on cardboard or heavy paper, and placed in the hands of the children to read after the lesson has been developed, as suggested in the article. Will primary teachers try this, and then report the result. How many would like to have more supplementary reading arranged in the same way?

TEACHING BY CORRESPONDENCE.—Some three or four years ago, Mrs. Susan Benner, of Green's Fork, Wayne county, began having her children write compositions descriptive of the plants, animals, soil, climate, customs, etc., of the neighborhood, and the best of these compositions were sent to schools in distant localities, with the request that these compositions be read to the pupils and that answers from the pupils be returned. In this way much valuable information was gained by the pupils, while at the same time the best possible training was being given in composition and language. Mrs. Benner has pursued this course for years and has her school correspond with schools in England, Australia, South Africa and other countries. In many cases not only compositions, but specimens of wood, leaves, grain, flowers, stones, etc., have been exchanged. Mrs. Benner contributed several articles to the JOURNAL, in which she described her work and gave examples of letters received. Many other teachers have taken her suggestions and have done similar work. The method is certainly a good one for a variety, and Mrs. Benner deserves much credit.

DR. WM. T. HARRIS, the U. S. Commissioner of Education, holds his place by right of leadership. Many men are recognized as leaders because of the office they hold. The whirligig of politics puts many a man at the head who really belongs far down in the ranks. Mr. Harris was conceded to be the leading educator of the country before he was made Commissioner, and should he lose his office on the 4th of next March, he would still be recognized as the first educator of the land. He was first appointed to the high office which he fills, not because of politics, but because of his ability; because he was the choice of the teachers of the country, without regard to politics. President Harrison appointed him when he had not voted for Mr. Harrison but for Mr. Cleveland; and then President Cleveland re-appointed him when he had not voted for him, but for Mr. Harrison. The JOURNAL does not know how Mr. Harris voted at the last election, and does not care; but it does know that he is the best man in the United States for the office of Commissioner of Education, and should be re-appointed. If President McKinley has any desire to comply with the wishes of the teachers of the country he will re-appoint Mr. Harris without a moment's hesitation.

DR. W. N. HAILMANN, who is now superintendent of Indian schools, has been doing a great work and should be retained in his position. Dr. Hailmann has organized these schools and put system and educational thought into them. His appointments have been absolutely non-partisan and teachers have been selected and retained solely on their merit. There is no more reason why Dr. Hailmann should be replaced by a new man when the new administration comes into power, than there is that the superintendent of city schools should be changed every time a new Mayor is elected. Dr. Hailmann is well known to all the leading teachers of this State and his superior ability and his conscientious devotion to any work he undertakes will be conceded by all. In the highest interest of the poor Indians, every person who has any influence should exert it in favor of the retention of Dr. Hailmann in his present position.

## QUESTIONS AND ANSWERS.

### STATE BOARD QUESTIONS USED IN NOVEMBER.

SCIENTIFIC TEMPERANCE.—1. Is alcohol of any value as a medicine? If so what is it? Is there anything that might be substituted for it? If so what is it?

2. Is alcohol a food? Why?
3. Does alcohol increase or relieve thirst? Why?
4. Why does the excessive use of alcohol cause the heart to degenerate into fatty tissue?
5. Why are the beer drinkers in danger of bleeding to death from a slight wound?
6. What can be said of pure nicotine as a poison as compared to other poison?
7. Why does the use of tobacco produce thirst? (Select five.)

PHYSIOLOGY.—1. What is the general scope of Physiology?

2. Describe the structure of a bone.
3. How may we preserve and increase the strength of a muscle?
4. What is the chemical action of the saliva upon food?
5. What are the chief constituents of food materials?
6. How would you ventilate a school room, at the same time preventing injurious draughts of air?
7. Draw a diagram to illustrate the circulation of the blood.
8. What part of the brain is the seat of voluntary action? (Any six.)

ARITHMETIC.—1. In the beginning of primary number work we use objects of uniform size, shape and color, etc. Why?

2. In the study of numbers "each number is considered: (a) As a whole. (b) As to the relations in it. (c) In its application."—State Course of Study. Illustrate the above by using the number three.
3. Define Arithmetic as a science; as an art.

4. { A man paid \$110 for a horse and sold it at a profit of 20 per cent.; require the gain. *Analyze.*  
 If a merchant pays 15 cents per yard for muslin, for how much does he sell it to lose 25 per cent.? *Analyze.*

5. How many terms are considered in thinking a ratio? Name them. Name two underlying principles of ratio.

6. If 300 pounds of wool, at 28 cents per pound, are exchanged for 36 yards of cloth  $1\frac{1}{4}$  yards wide, how many pounds of wool, at 35 cents per pound, should be given for 20 yards of cloth  $\frac{3}{4}$  yard wide? *Solve by proportion.*

7. Explain as to a pupil ready for such explanation, the cost of papering a room 12 feet long, 10 feet wide and 9 feet high—walls and ceiling—at 12 cents per square yard.

8. In the above problem, what knowledge would you consider necessary on the part of a pupil? How would you undertake to ascertain that knowledge? State the test.

READING.—1. Show how the principle of apperception can be applied in teaching the word *man*. 10

2. Point out the essential differences in the method of teaching primary and advanced reading. Give ground for differences names. 10

3. Must pupils form mental pictures from the language in studying reading lessons? Why? 10

4. When thought of as a process, into what two phases does reading separate itself? 10

5. It is said that every subject has an educational value, or cultured value. Discuss the educational value of the subject of reading. 10

6. Read a selection to the County Superintendent. 50

GRAMMAR.—1. Write a complex, declarative sentence. Explain its form and uses.

2. State the use of each word in the following:

Brisk youth appeared, the morn of youth,

With freaks of graceful folly,

Life's temperate noon, her sober eve,

Her night not melancholy,

3. Illustrate in sentences four uses of the adjective.

4. Illustrate the difference between the use of the comparative and superlative degrees of adjectives. Explain.

5. Use the expressions "not only," "but also," correctly.

6. How may pupils be stimulated to improve their power of expression?

HISTORY OF CIVILIZATION.—1. Describe the "three sorts of written history" spoken of in the preface to Guizot's "History of Civilization."

2. Give a sketch of the life of Guizot and indicate what qualifications he had both by nature and by education for writing history.

3. What are the essential ideas included in the idea of civilization by Guizot? Briefly explain each.

4. Explain what Guizot means by the "interior condition of man" and the "outward condition of man" and state his views as to the relation existing between the two.

5. What are the chief results of civilization?

6. State Guizot's view of the final results of civilization.

7. "It seems to me that the first idea comprised in the word civilization is the notion of progress, of development." Guizot. Explain the above and illustrate the idea from American history. *(Any five.)*

SCIENCE OF EDUCATION.—1. Define the term Science of Education.

2. Is there a science of education in the sense in which there is a science of arithmetic or algebra? Give your reasons.

3. Is there a science of education in the sense in which there is a science of medicine, agriculture or bridge building? Give reasons for your answer.

4. How are the principles which constitute the science of education discovered or worked out?

5. Would the most liberal mastery of an art, as medicine or education, require that one should know thoroughly the principles of the art? Justify your answer.

6. Can a knowledge of the science of education take the place of a thorough knowledge of the subjects to be taught? Give reasons for your answer. *(Any five.)*

HISTORY.—1. In a course of study for the public schools, which would you teach first, General, or U. S. History? Why?

2. What was the question involved in the Lincoln-Douglas debates of 1858? State exactly the position of each of the debators on that question.

3. What caused the panic of 1837?

4. What caused the panic of 1873?

5. What were the chief legislative measures passed during the administration of Hayes?

GEOGRAPHY.—1. How do you account for the fact that Mexico, situated in tropical latitudes, produces almost all varieties of fruit and grain?

2. Utah Lake and Great Salt Lake are fed from the same sources. One is fresh, the other salt. Why?

3. What is the Nicaragua Canal? Why should it be controlled by the United States?

4. Where and what is Armenia? Why is the attention of the world called to it at the present time?

5. What effect did the geographical conditions which surrounded the British colonies in North America have upon their development and consequent supremacy on the continent?

6. What geographical reasons can you assign for the fact that the first settlements in the Mississippi valley were slaveholding in character?

*(Select five.)*

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Virgil C. Curtiss, formerly superintendent of the schools of New Haven, has been elected to succeed Mr. C. B. Gilbert as superintendent of the schools of St. Paul, Minn.



## ANSWERS TO PRECEDING QUESTIONS.

SCIENTIFIC TEMPERANCE.—1. Sir Astley Cooper says: "During my long and extensive practice, I have not seen a single case of disease cured by alcohol. On the contrary, it may be considered the bane of medicine and the seed of disease, and I am fully of the opinion that a more dishonest or cruel act can not be inflicted on a patient than to prescribe or order alcohol as a medicine. Eminent practitioners say that alcohol may be used to produce loss of sensation, to depress vital force, and to allay fever; that for these purposes there are other articles so much superior to alcohol that they are regularly used instead of it; and that among these articles are opium, chloroform, nitrous oxide, ether, digitalis, salicylic acid, and quinine.

2. Alcohol is not a food, because "it can not supply anything which is essential to the due nutrition of the tissues." It is not a mineral food, for it contains none of the basic elements present in mineral foods; it is not a structure-building food, for it contains no nitrogen; and it is not a respiratory food, for intoxication by alcohol shows a decrease of temperature.

3. Alcohol increases thirst, producing a feeling of constriction in the throat and a sense of burning in the mouth and stomach. This is caused by the action of alcohol in absorbing water in the system, for which fluid it has a great attraction.

4. "Alcohol, when it is largely taken," says Dr. Richardson, "is wont to induce a desire for undue sleep, or at least desire for physical repose. Under such conditions there is an interference with the ordinary nutritive processes. The wasted products of nutrition are imperfectly eliminated, the respiration becomes slower and less effective, and there sets up a series of changes leading, independently of the alcohol as a direct producer of fat, to development and deposit of fatty tissue in the body." As a result, certain muscles, including those of the heart, become the centers of the degeneration called "fatty," and the heart exhibits the tissue in question.

5. By coagulation blood soon closes up a slight wound. Alcohol, diffused through the blood of a beer drinker, impairs coagulation and renders him in danger of bleeding to death from an injury that causes blood to flow.

6. Appleton's Encyclopedia says: "Nicotine, the active principle of tobacco, is one of the most virulent poisons known, a drop of the concentrated solution being sufficient to kill a dog, and its vapor to destroy birds."

7. A chewer of tobacco "spits his own weight in less than six months," and he who "spits a teaspoonful in five minutes drains his system of seventy-one barrels or nine tons of weight in fifty years." The expenditure of saliva caused by the use of tobacco produces the thirst of him who indulges in the paralyzing intoxicant.

GRAMMAR. 1. Galileo taught that the earth moves. This is a complex sentence because it consists of a principal and a subordinate proposition. It is declarative because it is used to declare a fact.

2. "Brisk" is an adjective modifier of the noun "youth.,," "Youth" is the subject of the verb "appeared." "The" modifies the noun "morn," which is an appositive modifier of "Brisk youth." "Of youth" is a prepositional phrase modifying "morn." "With freaks" is a prep-

ositional phrase modifying "appeared." "Of folly" is a prepositional phrase modifying "freaks." "Graceful" is an adjective modifier of "folly." "Noon," "eve," and "night" are subjects of "appeared" understood. "Noon" is modified by the adjective "temperate" and the possessive "Life's." "Eve" is modified by the adjective "sober" and the pronoun "her." "Night" is modified by the adjective "melancholy" and the pronoun "Her." "Melancholy" is modified by the adverb "not."

3. An adjective may be used as an attributive modifier; as, in the sentence, "That *attractive* picture was sold." It may be used as an attribute complement; as, in the sentence, "She is *sick*." It may be used as an appositive modifier; as in the sentence, "The flower, *beautiful* all summer, delighted the visitors." It may be used as an objective complement; as, in the sentence, "He painted the house *while*."

4. When the comparative degree is used, the objects compared must be considered in two distinct divisions; that is, the first object or class must not be included in the last; as, in the sentence, "The man is taller than the girl." When the superlative degree is used, the objects compared must be considered in one class; that is the first object or class must be included in the last; as, in the sentence, "The rose is the fairest of flowers."

5. He not only preached this doctrine but he also practiced it.

6. By daily attempts to express in good English their ideas and thoughts concerning the many things which are continually going on all around them. The teacher can correct errors, suggest improvements, etc., and in this way the pupil's vocabulary will be enlarged, his ideas of the meanings of words made more exact, and his discovery of the difficulties of writing will increase his respect for the standard works of literature.

GEOGRAPHY.—1. Mexico produces many varieties of fruits and grains on account of its varied climate, the temperature depending upon the elevation above the sea. In that part of Mexico which lies within the torrid zone, and which is also the most populous and fertile, the temperature varies all the way from 110° in the lowlands to 60° on the highest plateaus.

2. Great Salt Lake has no outlet except evaporation and is therefore salt, while Utah Lake has an outlet into Great Salt Lake which keeps the former fresh.

3. The Nicaragua canal is a ship canal in process of construction across Central America, and planned to utilize the San Juan river and Lake Nicaragua. It will be one of the most important waterways of the western hemisphere, and should be controlled by the United States because we are more vitally interested in the affairs of this hemisphere than any other nation.

4. Armenia is bounded, roughly, on the north by the Caucasus mountains, on the east by the Caspian Sea, on the south by the Euphrates River, and on the west by Asia Minor and the Black Sea. The attention of the world is called to it at the present time on account of the great numbers of its inhabitants who are being massacred by the Turks.

5. The geographical conditions surrounding the British colonies in America aided their development to some extent. The long line of sea front gave easy communication with the Old World. The mountain barrier served to make their settlements permanent and compact. The wide range

of climate from north to south gave ample room for choice to prospective colonists.

6. The Mississippi valley was more accessible to the slaveholding settlements of the southern colonies than to non-slaveholding settlements in the north.

PHYSIOLOGY.—1. Physiology in general treats of the vital phenomena of organic life.

2. See text-book, page 56.

3. The strength of a muscle may be preserved and increased by light exercise taken regularly.

4. The saliva exerts a chemical action upon the starch of foods. It causes the starch to combine with hydrogen and oxygen producing grape sugar.

5. Myosin, syntonin, gluten, casein, egg albumen, gelatine, fats, oils, starch, sugar; also salt, water and various other organic substances.

6. The method of ventilating a room would depend entirely upon the positions of the various doors, windows, etc.

8. The cerebrum is the seat of voluntary action.

HISTORY OF CIVILIZATION.—1. See preface of text-book.

2. See biographical sketch in text-book.

3. See pages 14 and 15.

4. By the "interior condition of man" is meant his intellectual condition, and by the "exterior condition of man" is meant his social condition. For Guizot's view as to the relation between the two see page 19.

5. The results of civilizations are advancements attained by the individual and society, in such things as the intellect, morals, religion, culture, spiritual life, family life, science of government, liberty of the citizen, and freedom of speech. The results of civilization are different for separate periods.

6. See pages 20 and 21.

7. Progress, the first idea comprised in the word civilization, indicates the advance of humanity. American history sets forth developments for the better in such things as civil government, road-making, modes of travel, conveyances of messages, instruction of the young, and implements for home and farm. With such advances there is also revealed growth of charity, religious privileges, freedom of labor, social equality, and care for the helpless. Our history reveals progress in almost every phase of individual and social life.

SCIENCE OF EDUCATION.—1. The Science of Education deals with the methods by which a human being at all stages of his development may be brought into possession of the highest knowledge of which his faculties are capable.

2. The Science of Education has not yet reached that perfected stage which we recognize in the sciences of arithmetic and algebra, whose laws are permanent and independent of individual, locality or time. Indeed, it is repeatedly asserted that such a stage is the ideal towards which theoretical pedagogy is constantly working; that a day is to be looked forward to in

the future when the indefiniteness, the incoherence and the mere routine of present educational methods shall give way to a Science of Education, which in the words of Virchow, "ought forever to proscribe the gropings of an ignorant education whose experiments are ever to be gone over anew."

3. There is a Science of Education in the sense that there is a science of medicine having well known principles and laws. Although many obstacles are met with in the practical application of theoretical principles, the substantial truth of these principles is not to be denied. Just as the physician in practicing medicine has his methods which depend for their validity upon the theories of medical science, so the teacher in practicing his art must keep in mind the theories of educational science.

4. There are certain general laws of human nature which serve as a beginning, and to these are added those experiences of teachers, which are seen to be almost universal, and in this way a code of principles or laws is built up to serve as a guide for the new teacher.

5. Although a man might practice an art without a thorough knowledge of its principles, his practice would certainly be limited, since he would be continually coming in contact with problems to which the principles of the art would furnish a solution where his practical knowledge would fail him. To know why a thing is done as well as what to do constitutes the most liberal mastery of an art.

6. It can not. It is certain that no amount of knowledge of how to teach would be of use to one ignorant of the subject matter of that which was to be taught. His predicament would be similar to that of a carpenter who knew how to build a house, but did not possess the material out of which to construct it.

ARITHMETIC.—1. The mind of the child works from the concrete to the abstract. Since, in the abstract, each unit is the duplicate of every other unit, we must present the concrete in this form also that the passage from one to the other may be facilitated.

2. See "State Course of Study."

3. Arithmetic as a science deals with the abstract attributes of pure numbers; as an art with the applications of these attributes in the attainment of practical results.

4. To make a profit of 20%, the horse must be sold for one-fifth more than the cost, \$110.  $\frac{1}{5}$  of \$110 is \$22, the gain. To lose 25%, the cloth must be sold for one-fourth less than cost, 15c.  $\frac{1}{4}$  of 15c is  $3\frac{3}{4}$ c.  $15c - 3\frac{3}{4}$ c is  $11\frac{1}{4}$ c, the selling price.

5. Two terms are considered in thinking a ratio. They are usually called the antecedent and the consequent. Two underlying principles are, (a) multiplying the antecedent multiplies the ratio; (b) multiplying the consequent divides the ratio.

$$\begin{array}{l}
 6. \quad \left. \begin{array}{l} 35 : 28 \\ 36 : 20 \\ \frac{5}{8} : \frac{7}{8} \end{array} \right\} :: 300 : x \\
 \text{or} \\
 1 : \frac{1}{8} :: 300 : x \\
 x = 75, \text{ answer.}
 \end{array}$$

7. Taking the walls of the school-room as illustrations, ask the pupil to tell you the dimensions of each wall to be papered and also the ceiling. Then tell him to calculate the cost of each wall separately. He will then tell you that the total cost is to be found by adding the cost of the ceiling to the cost of the walls.

8. To solve the problem unaided, the pupil would have to know how to find the area of a rectangle, and also how to find the cost of any number of square yards of paper when the cost of one square yard is given. The relation of a square foot to a square yard would also have to be known. If the pupil is not familiar with the above points, simple problems to illustrate each one would probably be the best way to explain them.

HISTORY.—1. If by this question is meant the regular, continuous, text-book study of each, we find in all courses United States History preceding General History. If the question means the amount of General History necessary for a proper understanding of United States History, then that amount should certainly be taught first. In our experience we have found it necessary to go back as far as the Crusades in General History, in order to have a good foundation for United States History.

2. The general question involved was that of slavery extension. Lincoln said "slavery is a wrong, and should be dealt with as a wrong." He believed that it should be absolutely restricted by the General Government to the limits which it then occupied, leaving the question of abolition to be dealt with later. Douglas "did not care whether slavery was voted up or down," but believed that the local government, and not the General Government, should have the chance to vote it up or down; and if the majority of the voters of any community wished to enslave the black man, he believed that neither the black man himself nor anyone else had any right to object.

3. Over-speculation in trade and public land brought on by the almost unlimited issue of paper money by the "wildcat" banks, which sprang up all over the country after the abolition of National Bank; the withdrawal of the government surplus from the banks for distribution among the States; and the issue of the "Specie Circular" requiring land payments to be made in gold, were the chief causes.

4. The immediate cause was the failure of a large banking-house in Philadelphia. This banking-house was largely interested in the building of the Northern Pacific railroad, and its failure started a panic among the great number of people who had invested their savings in the building of the railroad.

5. The most prominent legislative measures passed by Congress during the administration of Hayes were the "Bland Silver Law" and a measure providing for the deepening of the chief mouth of the Mississippi.

READING.—1. Assuming that the child is familiar with the sounds of the elements in the word *man*, the *a*-sound can be placed before the *n*-sound, and the union of the two will give the word *an*. Before the word *an*, now familiar, the *m*-sound can be placed, and the word *man* can be revealed as a new symbol.



lar to  $MN$ , and join  $CD$ , and produce it to meet  $BB^1$  in  $E$ . Draw the tangents  $EF$  and  $EF^1$ . Then we have  $EC \cdot ED = EB^1 \cdot EB = EF^2$ . Hence  $F$  is in a circle through  $BB^1$  and tangent to circle  $A$ . Join  $AF$  and extend it to cut  $MN$  in  $P$ . The circle whose center is  $P$  and radius  $PB$  will be tangent to circle  $A$  at  $F$ , and we have  $PA - PB = PA - PF = AF = S$ . Join  $F^1$  to  $A$  and extend it to  $P^1$ , and with  $P^1$  as a center and radius  $P^1B$  a circle will pass through  $B$  and  $F^1$ , and we have  $P^1B - P^1A = P^1F^1 - P^1A = S$ .  $P$  and  $P^1$  are two points satisfying the conditions. Q. E. F.

**PROBLEM 152.** A lawn is half as long again as it is wide; the cost of leveling it at 18 cents a square yard is \$846.72. Find the cost of enclosing it with a fence at \$1.80 per yard.

Solution by J. C. THOMAS, Petersburg:

Let  $x$  = the width; then  $1\frac{1}{2}x$  or  $\frac{3x}{2}$  = the length. 18 cents = the cost of one sq. yd. of leveling; then  $\frac{\$846.72}{\$1.18} = 717.567$  = the area.  $x \cdot \frac{3x}{2} = \frac{3x^2}{2}$  = the area.  $\frac{3x^2}{2} = 717.567$ ,  $x^2 = 478.378$ ,  $x = 21.89$  = the width,  $1\frac{1}{2}x = 32.835$  = the length. 56 times  $2 + 84$  times  $2 = 280$  yds. = the perimeter.  $280 \times \$1.80 = \$504$ , the cost of fencing.

**PROBLEM 153.** A and B undertake to do each  $\frac{1}{2}$  of a piece of work; A begins at 9, B at 10:30, both stop at 12, having done  $\frac{1}{2}$  of the work; they resume at 1; A finishes his share at 4:45; when will B finish?

Solution by L. N. FOUTS, Brownstown:

$6\frac{3}{4}$  hours = A's time;  $\frac{1}{2}$  = part of A's share done in 1 hr.;  $\frac{1}{17}$  = part of whole work done by A in 1 hr.;  $\frac{1}{3}$  = part of whole work done by A in 3 hrs.;  $\frac{1}{3} - \frac{1}{3} = \frac{1}{3}$  = part of whole work done by B in  $1\frac{1}{2}$  hrs.;  $\frac{1}{3} + 1\frac{1}{2} = \frac{1}{2}$  = part of whole work done by B in 1 hr. Since A and B each do  $\frac{1}{2}$  of the whole work in one hour, they are working at the same rate; and since B began  $1\frac{1}{2}$  hours later than A, he will finish  $1\frac{1}{2}$  hours later than A, or at 6:15 o'clock.

**PROBLEM 154.** I invested \$14,970 in the purchase of  $3\frac{1}{2}$  per cents. at 105, and  $3\frac{1}{4}$  per cents. at 97; my total income being \$500, how much did I invest in each stock?

Solution by N. HUGH THOMPSON, Convenience:

$3\frac{1}{2}$  per cents. at 105 will pay  $3\frac{1}{2}$  per cent.;  $3\frac{1}{4}$  per cents. at 97 will pay  $3\frac{1}{4}$  per cent.; \$14,970 yields an income of \$500 or  $3\frac{1}{4}\frac{2}{3}$  per cent.; reducing the per cents. to fractions having a common denominator, and using the numerators we have by alligation  $\begin{vmatrix} 484030 & 970 & 1525 \\ 486425 & 1525 & 970 \end{vmatrix}$ ; and dividing \$14,970 in the ratio of 1525 and 970, gives \$9,150 invested in  $3\frac{1}{2}$  per cents. at 105, and \$5,820 invested in  $3\frac{1}{4}$  per cents. at 97.

**PROBLEM 155.** Of a certain lot of goods, I sell one-fourth at a profit of 5 per cent.; one-third at a profit of  $7\frac{1}{2}$  per cent.; how must I sell the remainder to gain 15 per cent. on the whole?

Solution by J. D. FRENCH, Whiting:

Selling price of 25% at 5% profit is  $26\frac{1}{4}\%$ ; selling price of  $33\frac{1}{3}\%$  at  $7\frac{1}{2}\%$

profit is  $35\frac{1}{2}\%$ ; selling price of  $41\frac{2}{3}\%$  at  $(?)\%$  profit is  $52\frac{1}{4}\%$ ;  $52\frac{1}{4}\% - 41\frac{2}{3}\% = 11\frac{1}{4}\%$ ;  $11\frac{1}{4}\% = 27\%$  of  $41\frac{2}{3}\%$ . Therefore the remainder must be sold at a profit of  $27\%$ .

#### CREDITS.

- 145, 146, 152, 153—Millie B. Gray, Remington.  
 151 (partial solution, 153, 154, 155—J. Stommel, Hanover Center.  
 153, 155—Walter N. Vanscoyoc, Whitesville.  
 152—Frank N. Wade, Wadesville.  
 152, 155—J. D. French, Whiting.  
 153, 155—Alton Blunk, Crown Center.  
 152, 153, 155—I. S. Morse, Crumstown.  
 152—Helen Weston, Fairmount.  
 152, 154—John Morrow, Charlestown.  
 152—C. Omer Free, Brownsburg.  
 151 (partial solution), 154, 155—Michael Robinson, Otwell.  
 152, 153, 154, 155—Alidore Cassidy, Bristow.  
 152—J. C. Thomas, Petersburg.  
 155—Ruby Knowlton, Rensselaer.  
 145—Everett Beadles, Velpen.  
 151, 152, 153, 154, 155—L. N. Fouts, Brownstown.  
 151—J. C. Gregg, Brazil.

#### PROBLEMS.

156. Divide a triangle into equivalent parts by a line drawn from a given point in one of its sides.  
 157. Draw a triangle similar to a given triangle but with double area.  
 158. An equilateral triangle contains 320 sq. rds. Cut off a trapezoid containing 160 sq. rds.  
 159. A has a certain sum of money from which he gives to B \$4 and one-sixth of what remains; he then gives to C \$5 and one-fifth of what remains, and finds that he has given away half of his money. How many dollars had A?  
 160. A, B, C are three towns forming a triangle. A man has to walk from one to the next, ride thence to the next, and drive thence to his starting point. He can walk, ride and drive a mile in a, b, c minutes respectively. If he starts from B, he takes  $a + c - b$  hours; if he starts from C, he takes  $b + a - c$  hours; and if he starts from A, he takes  $c + b - a$  hours. Find the length of the circuit.

#### QUERIES.

47. Please tell through the JOURNAL the name of the "old bell ringer" who rang the Liberty Bell when the declaration of Independence was proclaimed.  
 F. TAYLOR, Petersburg.  
 48. What are the essentials of the "Pollard Method?" Please illustrate. Do you think it is better than either the word or the sentence method?  
 J. STOMMEL, Hanover Centre.



## TOWNSHIP INSTITUTE OUTLINES.

### GUIZOT'S HISTORY OF CIVILIZATION.

TEST-WORK :—NOTES, TOPICS, AND QUESTIONS,  
FOR USE AT TOWNSHIP INSTITUTES.

#### LECTURE IX.

[*The Topics in italics are the same as those in the Manual.*]

I. *Primitive elements of European social life; these reduced to what?* (241). (a) The first great cause tending to this. (b) The chief institution contributing to this end. (241, 242.)

II. *Monarchy*: How it has progressed in common with society; an example.

- (a) *Universality of*. (242, 243.) *Illustrate*. Which, force or moral influence, gave monarchy success? (Discuss.) (243, 244.)
- (b) *Flexibility of*. *Illustrate*. (244.) Where its strength does not reside. (245.)
- (c) *Meaning of*. (245.) "*The personification of legitimate sovereignty.*" *Explain*. (245.) Show that human nature believes in, and seeks for, legitimate sovereignty. (245, 246.) The promise of each kind of government, (246.) Show the continual effort to discover legitimate sovereignty. (246.) *Within what limits can nationality be personified in royalty?* (246, 247.) *Explain*. The claims of different types of kingly rule. (247.)
- (d) *The Legitimacy of*. *Explain*. (247.) Characteristics and attitude of legitimate sovereignty (247, 248); an illustration (248.) The tendency of the people of the present century. (N, 249.)
- (e) *The permanent influence and presence of*— (249, 250.)

#### MONARCHY.

- 1. The image of legitimate sovereignty (248, 249.)
- 2. Necessity for, at times (249, 250.)
- 3. Its unifying power illustrated (250.)
- 4. Its essential character (250.)
- (f) *Variety of, in European life*.
  - 1. *Elective*. In the barbarian monarchy of Clovis; and in a military way, in England. (Pages 251, 256.)
  - 2. *Hereditary*. In Europe, in the twelfth century, and afterwards. (258, 259.)
  - 3. *Religious*. Among the Visigoths in Spain, and among some of the barbarian tribes of the Goths. (252, 255.)
  - 4. *Barbarian*. In France. (255.)
  - 5. *Imperial*. In Italy. (255.)
  - 6. *Feudal*. Wherever feudalism prevailed.  
*Where was each dominant?* (See above.)  
*Which was the Saxon kingdom?* (256.) *Theodoric's?* (255.)  
*Pippin's?* (256.) *Charlemagne's?* (257.)

- (g)
1. Evolution of European monarchy. (250, 251.)
  2. The two monarchies of the fifth century. (251.)
  3. Nature of the barbarian monarchy. (251.)
  4. The beginning of hereditary succession. (251.)
  5. The influence of the element of religion. (252.)
  6. Nature of the monarchy of the Roman Empire; the attitude of the first Emperors (N, 252); their power (253); the rule of Napoleon (253.) A change in the character of monarchy under the Empire (253, 254.)
  7. The idea formed of the prince, in the seventh century, under the system of religious monarchy:
    - (a) As to the title of the king.
    - (b) As to his respect for law.
    - (c) As to the body and to intelligence.
    - (d) As to the protection of his life. (254.)
  8. The religious element: (a) its relation to man; (b) its effect (254, 255.)
  9. The different kinds of monarchy that followed the fall of the Roman Empire; examples (255, 256.)
  10. A return of the barbarian monarchy (256); the development of the religious principle (257.) The condition under Charlemagne, and after his death (257.)

III. *The Feudal monarchy; its rise; its theory; its reality.* (See note 158, 159).

IV. *Character of European monarchy in the twelfth century* (258, 259), *The need of a general public power*; its gradual growth through moral force (259). A new idea; the vital principle of modern monarchy (260); the efforts of other kinds of monarchy in behalf of the principles (260, 261). *How was it the chief conservator of the public peace?* (260, 261). The chief characteristic of the monarchy of modern Europe (261); the great result it has achieved (261).

#### LECTURE X.

1. Elements of ancient European society (29); their lack of unity; their final fusion (263); the failures experienced (263, 264).

*Explain how certain early social elements in European life have been retained* (264).

The nature of the union attempted; when the attempts were made; the peculiar nature of the attempts, and the unfavorable conditions (265); why was it right that they should have failed (265).

2. *Attempts at political organization from the twelfth to the sixteenth century.*

- (a) *The theocratic attempt at organization and supremacy. Obstacles preventing*:—(1) The nature of christianity an obstacle—how (267)? (2) The opposition of the feudal nobility (268). [What elements did the Church subdue (268, 269)?] (3) The necessity of the Church's recruiting itself from so many different classes (269, 270). [In the parts of the world where the clergy

did make itself master of society, what was the favorable condition? Explain (269).] (4) Internal dissensions (270).

The period of the greatest glory of the Church (271, 272 and N, 272). Gregory's wish (271). The two mistakes he made :— (a) As a theorist—how (271)? (b) As a revolutionist—how (271)? The natural consequences (272).

Societies, or sects, breaking away from the Church (272). Conflicts of sovereigns with the papacy (272, 273 and N, 272 and 273).

- (b) *Attempt of local republics.* 1. Explain how the free towns became the dominant character of Italian life, the feudal system subordinate (274, 275). 2. Nature of Italian republics (275, 276). Influence on human genius and energy (276); on popular depression (276); on foreign aggressions (277, 278).

[Two things wanting in these republics (277, 278). The movement, in Italy, from an episcopal government to a democracy, and on to a monarchy (N, 277). The unification of Italy (N, 278). Guizot's seeming preference in governments (N, 278)]. 3. Compare Italian republics with those of Greece (278, 279). 4. Attempt at municipal republicanism in South France (279, 280). In other places (280, 281).

[The true origin of the confederacy of the Swiss cantons (N, 280, 281). The crusade against the Albigenses; north and south of France compared (N, 280)].

Conflicts of the nobles with the free cities, and the results (282).

- (c) *The monarchical attempt at unification* (283, &c). Signification of the States General in France; of the Cortes in Spain; of the Parliament in England (284, 285, and N, 285).

The English Parliament in the fourteenth century (286); its effectiveness and final supremacy. Attempt at unification in Germany (287).

The general causes of failure, in Europe, at unification (287). The conditions necessary to success.

#### LECTURE XI—THE RISE OF CENTRALIZED GOVERNMENT—HIDDEN PROCESS OF CENTRALIZATION IN THE FIFTEENTH CENTURY.

##### I. At the threshold of modern history.

- a, State of Europe at the close of the fourteenth century (290.)  
b, How Europe entered into the path of centralization (291.)

##### II. Centralization in France.

- a, Trace the acts and reigns tending to establish French absolutism—

1. The hundred years' war (292.)
2. Unity secured by it (293.)
3. Consolidation of French territory (294.)
4. Departments of government centralized (294, 295.)

- b, The beginning of national history in France marks the exit of feudalism (296.)

- c, Public policy introduced by Louis XI (297.)

- III. Centralization in Spain.
  - a, Accomplished by Ferdinand and Isabella (298.)
- IV. *Condition of Germany in this period.*
  - a, House of Austria effects centralization (299.)
- V. *The influences tending to the rise of a strong monarchy in England.*
  - a, War with France a hundred years (299, 292.)
  - b, Wars of the Roses (300.)
- VI. Centralization in Italy.
  - a, Italian Republic yield to sovereign houses (300.)
- VII. Loss of liberties which were founded on tradition.
  - a, Where the loss occurred (300).
  - b, Reason for the loss (301).
- VIII. Origin of European diplomacy.
  - a, Balancing of national interests (301).
  - b, Diplomacy falls into the hands of kings (302).
  - c, Timidity of the people in disputing this prerogative (303, 304).
- IX. Attempts at church reform strengthen royal power.
  - a, Great schism of the West (305, 306).
  - b, Council of Constance attempts reform (306).
  - c, Reform labors of the Council of Basel (307).
  - d, Pragmatic Sanction (307).
  - e, Influence of these legal reform movements (308, 309).
  - f, Popular religious reform in Bohemia (309).
  - g, The Hussite War (310).
- X. Intellectual revolution destined to strengthen royal prerogative.
  - a, Origin of the classical school (310, 311).
  - b, Stages in the revival of learning (311, note).
  - c, Fall of the Eastern Empire (312).
  - d, Analogy between the *litterati* of the fifteenth century and the courtiers of Louis XIV (312, 313.)
- XI. *The distinguishing marks of modern history.*
  - a, *Theories as to where modern history begins—*
    1. *At the discovery of America, 1492.*
    2. *At the fall of Constantinople, 1453 (311.)*
    3. *At the invasion of Italy by Charles VIII, 1494 (380.)*
    4. *At the beginning of Luther's Reformation, 1517 (317.)*
    5. *At the rise of Frederick the Great, 1742.*
  - b, *Notable inventions marking the change from mediæval to modern history.*
    1. Mariner's compass; gunpowder; printing (313.)

#### NOTES HELPFUL ON ALL THREE OF THE LECTURES.

With the growth of common ideas and general interests the work of the feudal system was done. It had carried society over from the time when disorganization was so complete that no government could be the expression of a national life to the time when national governments were possible and actual. Europe had once needed it, and used it, but now it could no longer main-

tain its hold upon society as a whole. Everything that was looking to the future, and to new progress, began to see in it an obstacle in the way which must be overcome; like a tool no longer of use, it must be thrown aside. But, as in the case with all institutions which have been once of general value, it had become firmly grounded, and the effort to overthrow it must be long-continued and desperate. Indeed in some places it succeeds in maintaining itself; and wherever it thus survives after its work is finished, it becomes, according to a well-established principle or a law of history, a source of evil, a serious obstacle in the way of progress.

The crusades struck the first blow at the feudal system, in ways already indicated, by reducing the relative wealth and importance of the feudal noble, and by bringing many an estate into the hands of the successful burgher, by creating in nobles themselves a taste for a social life, which could not be satisfied on their isolated estates, and so bringing them within the dazzling influence of the royal courts, where titles and decorations formed but a poor substitute for the real power which the monarchs were winning from them; and, not least of all, by the fact that the crusades—a great common movement from common impulses and motives, and directed to a common end—created general ideas and a common life.

The development of commerce—by accumulating wealth, and, with wealth, power in the cities—raised up a strong class opposed to feudalism and ready to support the monarchs with resources against it. Accumulations of money rendered possible regular systems of taxation, and these in turn rendered possible the organization of standing armies. The standing army enabled the monarchs to dispense with the military support to be derived from the feudal system, and, since the standing army could be kept permanently in the field, it possessed a great advantage over the temporary levies of any feudal noble.—*G. B. Adams.*

By slow and steady steps, however, a work of unification is wrought out by the Capets. In every direction they stretch out from their central duchy of France their hand of power and of intrigue and draw the pieces of feudalized Neustria, together into a compact mass. The work is thoroughly done, moreover, at almost every stage; out of populations as heterogeneous as any in Europe they construct a nation than which none is more homogeneous; out of feudal lordships as strong, as numerous, as heady, and as stiffly separate as any other equal territory could show, they construct a single kingdom more centralized and compacted than any other in Europe. The processes of these singular achievements give to the history of the French monarchy its distinctive political significance; the means which the Capets devised for solidifying, and after its solidification, for enlarging and effectuating their power, furnish some of the most suggestive illustrative material any where to be found for the general history of government. Such were the materials out of which the Capets had to build up their monarchy. It was their task to undo the work of feudalism. But these were not the only materials that they had to handle in the difficult undertaking. There were other privileges besides those of the feudal barons which it was necessary to destroy or subordinate before they could see their power compact and undisputed.—*Woodrow Wilson.*

In Spain, the feeling of patriotism had early arisen on account of the continuous wars with the Arabs, and the religious character of these wars had seemed to invest the feeling with an additional sacredness. The numerous little Christian states which arose during the long struggle for the recovery of the peninsula, had been gradually absorbed by two, Aragon and Castile. By the union of these on the marriage of Ferdinand and Isabella, and by the conquest of Granada, the last Moorish kingdom, which followed in 1492, Spain was united under one government and the nation was given a definite shape.

William the Conqueror had observed in France too many of the difficulties—he had never been extremely careful himself to smooth away such difficulties—into which the feudal system brought the kings to be willing to have them repeated in his own experience when he became king of England. Accordingly, when he divided up the forfeited lands of the Saxons among his followers, he introduced two important modifications of the usual practices of the feudal system.

In the first place, when he bestowed upon any one a large holding, he distributed it, with few exceptions, in different places over his kingdom, a part in one place and a part in another, instead of giving it in a single continuous area. He thus prevented the consolidation of the fief about some local center, as a little independent principality within the realm.

In the second place, he compelled all the subordinate vassals, of whomsoever holding their lands, personally to take an oath of fidelity to himself in addition to the oath sworn to their own immediate lords. Upon the Continent it was generally the practice for the immediate vassals of the monarch alone to take the oath of fidelity to him, this being supposed to cover, also, their vassals, who themselves swore fidelity only to their immediate lord. By this innovation William secured a direct and personal claim upon every holder of a feudal estate. William also retained in his own possession, as royal domains, much larger estates than he granted to any single vassal.

As a result, the king became the strongest power in the state. The struggle which took place in England was not, therefore, like that on the Continent—a struggle on the part of the kings to win back their powers from their vassals, to change theoretical into actual prerogatives, but it was a struggle of the barons to win rights and privileges from the kings. In this struggle the nobles found their natural allies in the citizen class, and the alliance here was between nobles and people against the kings, and not between kings and people against the nobles, as it may be considered to have been upon the Continent. This is well illustrated in the Magna Charta won from King John in 1215, the first document of the English constitution, in which privileges and rights are won for noble and commoner alike. It is illustrated, also, by the fact that the first Parliament, in which the representatives of the citizen class sit in deliberation with the nobles, is that summoned in December, 1264, by Simon de Montfort, chief of the insurgent barons. Therefore, we have growing up on the Continent, in the next ages, the absolute monarchies in which popular liberties are extinguished, while in England grows up a limited monarchy, which finds its strongest support in the willing consent of a free people.—*G. B. Adams.*

## COMPOSITION.

## I. Purpose.

## 1. The purpose of composition is :

1<sup>1</sup>. To furnish the child food for thought adapted to his stage of thinking, and to develop in him the power to think systematically and readily on any object of thought.

2<sup>1</sup>. To lead him into the habit of expressing his thoughts in correct, clear, energetic, elegant English.

NOTE.—A fundamental error has been made here, in that students have been asked to express their thoughts when they had none to express. It is a common error for teachers to ask their children to write essays on such subjects as "Virtue," "Patience," "Industry," etc., when the children know practically nothing about such subjects. It can not be too strongly emphasized that thought development must precede expression, and that there can be no good clear writing without good clear thinking.

## II. Steps.

Discourse in the process of construction, on the basis of the way it deals with its object of thought, divides itself into—

a. Description.

b. Narration.

c. Exposition.

d. Argumentation. Hence there is a line of—

1. Description work.

2. Narration work.

3. Exposition work.

4. Argumentation work.

## III. The Process of Description.

## 1. Nature of.

a. Deals with the individual object as co-existent or fixed.

1<sup>1</sup>. By means of attributes.

a<sup>1</sup>. Attributes of relation.

1<sup>2</sup>. Purpose and means.

2<sup>2</sup>. Cause and effect.

3<sup>2</sup>. Time and place.

b<sup>1</sup>. Inherent attributes.

1. Form. 2. Size. 3. Resistance. 4. Color. 5. Sound. 6. Odor. 7. Taste.

2<sup>1</sup>. By means of parts.

a<sup>1</sup>. Attributes of each part as of the whole.

All education consists in the development of thought and its correct expression.

It is the thought with which this outline is in harmony that, in the light of the above, the purposes of composition work are, in general, two : 1. In common with many other branches of study, it should furnish the child suitable material to exercise his mind upon to the end that he may become a good, clear thinker on any subject. 2. As its distinctive purpose, it should lead the child into the habit of expressing his thoughts in correct, clear,

energetic, elegant English. This is to be made a habit, which means that the child is to be constantly watched, and never permitted to use bad English under any circumstances without being corrected. The child can never be lead to acquire the habit of using good English who is held to its correct use only during a recitation period of twenty minutes, if he is permitted to use bad English during the other five or six hours of the day at school, and possible much of the time at home.

Logically, the composition work falls into four lines, viz.; Description, Narration, Exposition and Argumentation.

Description and Narration both deal with individual objects of thought. Thus one can describe a particular tree or a particular lead pencil, but not *tree* or *lead pencil*. In a similar way one could treat a particular tree or lead pencil by narration, but not *tree* or *lead pencil* as the name of a general object of thought. But Description and Narration deal with their objects in different ways. Description deals with its object as to its attributes and parts not as changing but as fixed or co-existent. Thus Description takes an object at a particular time and treats of it by setting forth the attributes and parts as they then exist.

Since the mind grasps an object as a whole first, the attributes of an object as a whole are set forth, then the parts with their attributes.

Description may then be defined as that form of discourse by which one mind presents to another an individual object as to its co-existent attributes and parts.

Narration, while like Description in that it deals with a particular object of thought, differs from it in that by Narration a particular object is presented as it exists at successive moments of time—as to its changing attributes and parts. Narration may thus be defined as that form of discourse by which one mind presents to another an individual object as having successive attributes and parts.

Exposition deals with the relations among individual objects with the purpose of setting forth their common attributes. When the mind becomes fixed on the common attributes, the individuals are lost in the general, and the process of presenting the attributes becomes Exposition. Exposition may then be defined as that form of discourse by which one mind presents to another the content of a general idea.

The three processes, Description, Narration and Exposition are closely related and each merges into the others. When the emphasis rests upon the individual as fixed, the process is Description; when it rests upon the individual as changing, the process is Narration; when it rests upon the individuals as to their common attributes, the process is Exposition.

Argumentation also deals with general ideas, and is therefore, so much like Exposition. But it seeks to apply general ideas to realities. Thus the argument to prove that a certain object is a horse, would seek to apply the general idea *horse* to the real object; or to maintain that a certain act is right or wrong would be to apply the general idea *right* or *wrong* to the act as a reality. All argument plainly consists in this—the application of general ideas to realities. Argumentation may thus be defined as that form of discourse by which one mind presents to another the application of general ideas to realities.



Description, Narration, Exposition and Argumentation have been defined in these notes as a product, but they may, from the above discussion, be easily defined as processes.

Since Description deals with attributes and parts, a few words will be said upon attributes.

Every object may be considered in itself and in its relation to other objects. This gives a basis for classifying attributes into :

1. Attributes of relation.
2. Inherent attributes, or properties.

Attributes of relation are those which cannot be thought without holding the objects to which they belong in consciousness with some other object. They are attributes of (1) purpose and means, (2) cause and effect, (3) time and place.

Inherent attributes are those that determine the object from within. They are (1) Form, (2) Size, (3) Resistance, (4) Color, (5) Sound, (6) Odor, (7) Taste.

For an exhaustive treatment of the subject, *attributes*, the reader is referred to Tompkins's "Philosophy of Teaching," pp. 120-138.

ERRATA.—In the notes on grammar, in the December issue, on page 884, paragraph 2, the sentence, Then "sun" would be neuter gender; "moon" feminine gender, and "corn," common gender, etc., should have the word neuter where the word feminine is used.

In the notes on spelling on page 897 under paragraph 3, the o in "gov-nor" in the first syllable should have been marked with a semi-dieresis over it, thus, gov-nor. On page 898, In the sentence, "ow says ũ in this word, but there are other ways of saying ũ. It may be said by ũ alone and by o alone," each of the u's should have been marked with a breve above and the o, with a semi-dieresis above.

GEO. W. NEET.

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## OFFICIAL DEPARTMENT.

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The following letters from State Superintendent Geeting will be of great interest at this time.—ED.

INDIANAPOLIS, IND., Dec. 17, 1896.

DEAR SIR—We have before us this morning your letter of inquiry dated December 15. I will answer the questions in the order asked :

1. "If the disease diphtheria is found quite extensively in the community and the trustee notifies the teacher to close his school, which is thought to be the best thing to do also by the patrons, is it not the duty of the trustee to pay the teacher, without any discussion, per-diem for the time the school was closed?" The Supreme Court of Indiana (74 Ind. 127) holds that in a contract, such as the one before us, the teacher is entitled to recover compensation for every day covered by the term provided for in the contract, and is not confined to the days in which she actually taught school, if the failure to conduct the school each day of the term was caused by the wrongful act or omission of the authorities. The Indiana Appellate Court,

Vol. 10, 428, says: Where a school town contracts with a teacher for a certain number of weeks of service, and, before the expiration of the term, closes the school upon order of the county board of health because of the prevalence of diphtheria, it is liable for the teacher's salary for the time the school is closed, the non-performance of the contract not being due to an act of God.

2. "In case there seems to have been injustice done the applicant for teachers' license, in the person of County Superintendent in grading the manuscripts, is there any appeal to the State Superintendent; if so, how can it be accomplished?" All questions of a general character, are appealable from the County Superintendent to the Superintendent of Public Instruction. You have simply to state your grievances in the proper form, setting forth the reason for your appeal, presenting the same to the County Superintendent, within 30 days after receiving your report, who will complete the record and forward the matter to this department for consideration.

Very truly,

D. M. GREETING.

INDIANAPOLIS, IND., Dec. 16, 1896.

DEAR SIR—I have just received your favor of December 15th, in which you make inquiry about the power of a County Board of Education to regulate Christmas holidays. In reply, will say that the law creating the County Board of Education gives this body power, and makes it its duty to pass rules and regulations for the government, attendance, etc., of the schools of the County. The custom of having a week's vacation at the time of the Christmas holidays, has become almost universal throughout the State. All of the city and town schools, and a great many of the country schools observe this holiday. It is a vacation which the children of the State look forward to with great interest. I am of the opinion that it should be universally observed, and hold, as above, that the resolution of your County Board will be binding on the teachers of your County.

The fact that your schools have been broken into with sickness, does not change the question. This is one of the many misfortunes which we are called upon to meet.

Yours very truly,

D. M. GREETING.

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## MISCELLANY.

### PROCEEDINGS OF THE INDIANA ACADEMY OF SCIENCE.

The Annual Report of the Indiana Academy of Science for 1895, has been issued and recently distributed. By an act of the last Legislature, a temporary compact was made to the effect that the state publish and distribute the Proceedings to members of the Academy, various libraries, and to such societies and individuals as the Academy may designate. The Report contains about three-hundred pages with several half-tone plates, a

hydrographic map, and embraces in the domain of the physical and biological sciences, the discussion of problems of vital importance to the state. The volume is well printed and the arrangement of contents and index is a commendable feature. In short, the contribution is compact, interesting, and highly instructive.

Among the more noteworthy papers, are Butler's "Indiana Birds", Call's "Unionidae", Everman and Scovell's "Fishes of the Missouri River Basin", Coulter's "Phanerogams", and the "Biological Survey" by Eigermann.

The publication of such reports has many important uses, and in the allotted space, it would be impossible to review a work composed of so many essential and independent parts, and where each is the resume of a large subject.

The work and purpose of the Academy is well expressed between pages 7 and 11. The inception and continuance of the preservation of such scientific literature deserves special recognition by the state. Its value cannot be overestimated, and it devolves upon the people of the state to heartily co-operate with the Academy that there may be perfect continuity of the work and the facts of scientific interest brought together in the interest of progress. Never in the history of science has the development and accumulation of knowledge advanced at such a rapid rate as now. Investigations have become so numerous and results so important, that such valuable information should be kept current and accessible. By the adoption of the plan of co-operative work only, can there be no dissipation of energy and the usefulness of scientific bodies will be made effective.

In the proposed Biological Survey of the state, so successfully begun at Turkey Lake, by Dr. Eigenmann, to make our fauna and flora compact and more complete, involves an undertaking which marks a new epoch in the realm of scientific inquiry. By its creation is born an amount of work that is fairly appalling, but through the co-operative action of the state, together with the fraternal encouragement from academies of other states, the most comprehensive results will follow. In a word, may there be the fullest sympathy and co-operation on the part of the state to continue its present existing relations with the Academy in issuing its serial publications, to insure completeness and synonymy of work, to stimulate the real scientific spirit, and to establish a datum-line of mutual interdependence, which would speedily lead to more complete and persistent investigation, to which we must look for the attainment of the greatest collective benefits.

GEORGE W. MARTIN, Biologist,

INDIANAPOLIS HIGH SCHOOL.

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#### PLEDGED AGAINST THE CIGARETTE.

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NOBLESVILLE—A recent report made by Superintendent Haines of the city schools, shows that 97 per cent. of the 454 boys enrolled, have signed a pledge to refrain from the use of cigarettes during the present school year. In several grades, girls have formed organizations to assist the boys in any way they can. Cigarette smoking has been a barrier against the progress of

the schools here for some time. For three years, teachers and parents have labored earnestly to stop the evil. Efforts to locate dealers who sell, contrary to law, have been of no avail. An attempt will now be made to have the City Council pass an ordinance requiring cigarette dealers to take out a \$300 license before selling.

Noblesville has a "curfew law" which it enforces with good effect.

AT THE County Association in Pulaski county the teachers passed a resolution *opposing* the change in the license law, whereby the State Superintendent will examine and grade teachers' manuscripts for securing a license.

UNION CHRISTIAN COLLEGE, located at Merom, is having a good year. The work is always thorough and the moral influence the best possible. For catalogue and further information, address the president, L. J. Aldrich, D. D.

PORTLAND.—The High School of this place has started a paper called "The High School Apropos". The editors say that the paper was not started to fill a want, but to create a want. Good. Judging from the first issue, a great many people will want to see the next, and the next.

THE NATIONAL SUPERINTENDENTS' CONVENTION which is to meet at Indianapolis, February 16, 17, 18, promises to be a very large meeting. Every superintendent in Indiana, city, town and county should arrange to be present. Let Indiana extend a royal greeting. Charles B. Gilbert, superintendent of schools at Newark, N. J. is the president.

THE KOSCIUSKO COUNTY TEACHERS' ASSOCIATION assembled at Warsaw November 27 and 28, endorsed most heartily Supt. Geeting's recommendations to the coming legislature. They recognized the great value of the Young Peoples' Reading Circle, and recommend that trustees purchase a sufficient number of entire sets to supply at one time one-third of their schools.

THE MADISON COUNTY BOARD OF EDUCATION at a recent meeting passed a resolution favoring closer supervision of the country schools, and two of the trustees expressed a determination to inaugurate township supervision next year. It also declared in favor of compulsory education. This county had a large and profitable association. Among the workers were Mrs. Campbell, F. A. Cotton and Superintendent Greenstreet, of Henry county.

THE STATE NORMAL SCHOOL has added three new members to its faculty, two of whom are additions, and one succeeds the late Professor Hoich, assistant in the geography department. Professor Hoich's successor is Professor W. A. McBeth, of Crawfordsville, a graduate of the State Normal and also of Wabash College. Professor Thomas H. Grosvenor has been selected as assistant in the department of English. He is a graduate of the Minnesota State Normal and of the Wisconsin University. Professor F. R. Higgins is to be assistant in the department of mathematics. He was educated in a Nova Scotia college, afterward graduated from Cornell and more recently attended the University of Chicago. The faculty now numbers thirty-one.

**MARION**—The fifth semi-annual commencement of the grammar grades of the Marion Public schools will be held January 20. There will be about 50 graduates. This feature of the work was introduced by Superintendent W. D. Weaver three years ago, and is found to be very successful. It both keeps the pupils in the grades better and adds quite largely to the number entering the high school. Pupils are regularly promoted twice a year.

**THE REPORT** of the state librarian shows the library in excellent condition, and under the new library law, the State Library is being made of more use to the people of the state. During the last year, 1,533 volumes were added, besides over 500 pamphlets. A recent visit to the library showed everything in good condition. Mrs. Emma L. Davidson is the librarian and she leaves nothing undone that will add to the efficiency of the library, and spares no pains to render assistance to patrons who wish to consult the books.

**THE GRANT COUNTY** teachers' association met in Marion, Friday evening, December 4, and remained in session the next day. The evening was devoted to a lecture, by W. H. Sanders, on "The Mind Life." The address was such that not one could hear it without being inspired to nobler efforts. The following subjects were discussed: Influence of Literature on Civilization, English in the Secondary Schools, Politics in the Public Schools, Relation of parent and teacher. The attendance was good and the exercises interesting.

**MORGAN COUNTY.**—The Board of Education at its last meeting passed a resolution urging upon the Legislature the necessity of passing a law establishing a School Supply Commission. The duty of this commission would be to examine, recommend and get prices on all school supplies. This being done, trustees could buy only from this list and at the prices named. Such an arrangement would save the State from being swindled out of thousands of dollars each year, and the annual saving in the cost of material would be more than the entire cost of supervision.

**THE TRI-STATE NORMAL COLLEGE**, located at Angola, is still doing its usual high-grade work. A new term will begin January 5, and at this time any one can begin a course. A new Latin class, and all other needed classes will be started at that time. The writer recently had the privilege of looking into the faces of the students of this school, and can say truthfully that they are an intelligent looking body of young people. President L. M. Sniff bears testimony that they are at work and are making excellent progress. For catalogue and further information address the president.

**MARTIN COUNTY** held its annual association at Loogootee, and did some good work. This meeting is conducted on a novel plan. Each township is assigned a topic to discuss, and the township itself arranges for the principal paper on that subject, and the discussion of it. Most of the townships came "loaded;" there was a scarcity of time. Jonathan Rigdon and W. A. Bell each gave an evening lecture and did other work. The general feeling was that the meeting was a good one. E. McFarland, Superintendent of the Loogootee schools, was president of the association, and makes a good presiding officer. A. W. Inman was elected president for next year.

BLOOMINGDALE ACADEMY is the oldest academy in the state, and has always done work of a high grade. Barnabas Hobbs was for many years its principal. A large majority of the teachers of Parke County have at some time been students there, and this has been true for many years. About eighty per cent. of those who complete their course here, continue their studies in higher institutions of learning. Andrew F. Mitchell is the principal.

DELPHI.—Patriotic Day was observed in quite a pleasant manner at our school, with recitations, marches and songs. In addition to these exercises, each child had a patriotic quotation from some author—from the oldest pupil to the one who said, "The God who gave us life gave us 'liberty' at the same time." There is no doubt but what the pupils of Miss Mollie Young's school will be patriotic, for patriotism is taught to them as are the other branches. It is quite probable that we have the nicest country school-house in all Hoosierdom, and the patrons have a right to be proud of District No. 10, Deer Creek township, Carroll county, Indiana. J. M. B.

THE NORTHERN INDIANA NORMAL SCHOOL at Valparaiso, Indiana, has been making improvements in its buildings, laboratories, library, during the last year, which have added very much to the success of those who attend the school. It now has four laboratories—Physiological, Chemical, Biological and Pharmaceutical. These are all well equipped, any of them being sufficient to accommodate at one time, 60 students. The laboratories are furnished in the most satisfactory manner. The new course in Psychology and Pedagogy, under Professor Sanford Bell, is starting out well. Professor Bell is doing most excellent work and is an enthusiastic instructor. Two of the teachers are away, one is attending Johns Hopkins University, and the other the University of Michigan. It is the purpose of the school to give the highest grade of instruction, and yet at an expense the very lowest.

DAVISS COUNTY.—The teachers of Daviess county held their Second Annual Association on Friday and Saturday, November 27 and 28. The meeting was a decided success as to enrollment and enthusiasm. The program was complete and the discussion of the subjects was interesting. Miss Josephine Sanford, of the city schools, had a class of chart pupils present, and gave the teachers some practical work, which was thoroughly appreciated. Dr. Stott, of Franklin College, delivered the address, subject: "Is the World Growing Worse?" Resolutions were passed urging the next Legislature to place the school tax at sixteen cents. Representative Patterson was present, and when called upon, announced that he would introduce the bill and vote for its support. Superintendent Wallace has proven himself the right man in the right place; always at work for the best interest of the schools of this county. President Alanson Wise made many friends by the way the Association was conducted. Friend Colbert, of Veale township, was elected president for the ensuing year.

THE teachers of Starke county held their tenth Annual Association, December 18-19, with Arnold Tompkins, of Illinois, and Louis D. Eichhorn, of Logansport, as instructors. The teachers were all present but two, these were detained by sickness. This was one of the most successful meetings yet held.

W. B. S.

**PERSONAL.**

JNO. H. RADER is the best man at Selma.

ED. F. DYER is the man in charge at Albany.

E. MCFARLAND is superintendent of the schools at Loogootee.

W. R. SNYDER still has the Muncie schools well in hand.

BRAINARD HOOKER is principal of the Rochester high school.

W. O. ASPEY is principal of the schools of the town near which the first gas well in Indiana was driven.

J. B. LEMASTERS, formerly a leading teacher in Johnson County, is now superintendent of the schools at Kewanna.

E. F. SUTHERLAND, formerly principal of the Southern Indiana Normal School, is now superintendent of schools at Shoals.

ARNOLD TOMPKINS, of Illinois University, but whom Indiana still claims, made the annual address before the Michigan State Teachers' Association.

CHARLES HOICH, assistant professor of geography in the State Normal School, died November 28. He had but just entered upon the duties of his new position when thus called away.

L. M. SNIFF, President of the Tri-State Normal, at Angola, made an address on "The Personality of the Teacher," before the Lagrange County Association, that was highly appreciated.

FREMONT GOODWIN, for many years superintendent of Warren county, is now state senator. He is a good man and would make an excellent chairman of the educational committee.

DR. GEO. S. BURROUGHS, president of Wabash College, has been in ill health for some time past, and is now off duty for a time recuperating. His many friends wish him a speedy return to vigorous health.

E. S. CLARK, for eleven years an Indiana teacher, but for the past twelve years superintendent of the schools at Henderson, Ky., still reads the JOURNAL and still retains a warm place in his heart for old Indiana and Indiana teachers.

PROF. E. E. HENRY, of Franklin College, is doing quite a good deal this winter in the line of university extension work. He has classes in Franklin, New Albany, North Vernon and Columbus, and his classes average over 400. His work is with Shakespeare at present.

DR. S. WEIR MITCHELL, the author of "Hugh Wynne, Free Quaker," the novel of the American Revolution now just beginning in *The Century*, is a well-known physician of Philadelphia who is becoming as famous in literature as he has been for many years in his own profession. He was born in Philadelphia in 1829, and he has practiced in that city for many years, making a specialty of nervous diseases.

W. A. JONES, the first president of the State Normal School, and to whom Indiana owes more educationally than to any other man, is now at the head of the Institution for the Blind, at Nebraska City, Neb.

ROBERT C. KING, for several years a teacher of English literature in the Indianapolis High School, is now representing the interests of Henry Holt & Co., of New York city. Mr. King is an excellent teacher and an affable gentleman, and will faithfully and efficiently represent his employers.

E. R. SMITH, for many years the popular and efficient agent of Ginn & Co., will hereafter represent the interests of D. C. Heath & Co. in Indiana, Ohio and Michigan with headquarters at 355 Wabash Ave., Chicago. The teachers of Indiana will be glad to learn that Mr. Smith will still continue to look in upon them occasionally.

GEO. C. TYRRELL, superintendent of Ripley county, received from his teachers at the session of the County Teachers' Association, held the Friday and Saturday after Thanksgiving, a handsome silver tea service. Mr. Tyrrell is just completing his sixth year as superintendent and the teachers took this way to show their appreciation.

T. J. CHARLTON, superintendent of the Boys' Reformatory at Plainfield, recently made an able address on "Compulsory Education" at the annual meeting of the Charity Organization Society of Indianapolis. He had an immense audience and the address was well received. It has been printed in circular form and may be had by writing to Professor Charlton.

MRS. JAMES H. HONAN, *nee* Miss Mollie McMahon, formerly principal of the Covington High School, and later principal of the Warsaw High School, has been recently admitted to the University of Berlin. This is an honor conferred on few women. It is conceded that the requirements are stricter at Berlin than at either Leipsic or Jena. Dr. Honan is with his wife taking an advanced course in medicine and surgery.

F. A. COTTON, Deputy State Superintendent, recently spent three weeks in a Martinsville water-cure on account of rheumatism. He was very much helped by the treatment, and is now at his desk again. While there he visited the schools, and he speaks of them in very complimentary terms. He says that Superintendent W. D. Kerlin is doing superior work. He also reports that the Martinsville School Board is one of the best in the State. It holds the Superintendent responsible for the schools, and gives him power in accordance with his responsibility.

MR. JESSE H. BROWN, for many years director of drawing and art instruction in the schools of Indianapolis, has frequent calls for his illustrated lecture on picture drawing. Under this modest title he gives large graphic crayon and charcoal sketches of animals, objects, human figures, landscapes, ornamental forms, beautiful designs, etc., showing the beauty of form in the common things about us. The lecture is admirably adapted to teachers' institutes, church societies and other organizations wishing a pleasing, wholesome, elevating and instructive entertainment. He can be addressed at 421 Broadway, Indianapolis.



**BOOK TABLE.**

**THE TEACHER** is the name of a new educational paper published at Philadelphia, Penn. It is under the editorial direction of the educational club of Philadelphia. Vol 1. No. 1 is a good number. The contributions are from the best writers. Price, \$1.00 per year, for 10 numbers.

**HOW TO CELEBRATE NOTED DAYS** is a valuable little book published by March Bros., Lebanon, Ohio. Full and complete programs for every holiday and for the birthdays of noted men and authors are provided. These programs are suited to any school. It also contains a complete outline of the life and writings of each author treated. Price, post-paid, 25c.

**THE AMERICAN BOOK CO.** issues a beautiful calendar for 1897 in colors on strong tinted paper. It has a patent attachment by which the leaves are easily turned and preserved and is the most convenient and serviceable calendar issued. It will be sent free of charge to any teacher applying for it. Address the publishers, American Book Co., New York, Cincinnati or Chicago.

**THE YOUNG PEOPLE'S JOURNAL**, George F. Bass, editor and publisher, Indianapolis, has been enlarged and improved. Commencing with the September issue, the amount of reading matter was increased, and a colored paper cover gives it a finished appearance. We understand that the number of subscribers has grown very materially. Its excellent contents should secure for it an entrance into every household that has the best welfare of its children at heart.

**MANUAL NUMBER, ALPHABET, AND COLOR SEWING CARDS.** Designed by Sadie P. Barnard, and published by Williams and Rogers, Rochester, N. Y. It is a little difficult to explain these cards, and tell teachers how beautiful they are and how useful they may be made in Kindergarten classes and primary schools. A complete set contains fifty cards, arranged progressively in five series. Series A, comprising twenty cards, six of which represent colored objects and figures, and the remaining represent colored letters and figures. These are designed to aid the child in learning simple addition, a part of the alphabet and the standard colors. Series B, similar to Series A, is to teach the child subtraction, etc. The cards are upon superior board and are very attractive. The price of one set is 50c. A sample set will be sent to teachers for 25c.

**THE STORY OF GREECE.**—By H. A. Guerber. Linen, 12mo, 288 pages. Price, 60 cents. American Book Company, New York, Cincinnati and Chicago. There is nothing so fascinating to the young as real and true stories of great men, great events and great achievements. In this book the story of Greece is told in a series of stories which will give children pleasure to read and at the same time make a deep impression on their minds. These stories are principally about persons, but they are so connected and described as to give a clear idea of the most important events that have taken place in the ancient world. They are written in the author's well-known charming style, and are alike interesting, instructive and inspiring. The book is a part of the Eclectic School Readings, and its attractive contents, beautiful illustrations, and handsome appearance make it a worthy addition to that new and popular series.

HARPER'S MAGAZINE for January continues the subject of the White Man's Africa by a paper on "Portuguese Progress in South Africa" by Poultney Bigelow, showing how ineffectual a colonizer Portugal has been during four years of nominal possession. "Science at the Beginning of the Century" by Dr. Henry Smith Williams is an important contribution to the history of nineteenth century civilization. "The Martian" by Du Maurier is continued and the other fiction of this number is noteworthy. This number is fully up to the standard of this very excellent periodical.

HARPER'S BAZAR is authority on matters of etiquette and fashions, and a great help to every woman who desires to keep "up with the times."

HARPER'S ROUND TABLE (weekly) for Christmas was an especially bright and attractive number. It contained a fac-simile of the manuscript copy of the old poem "The Night before Christmas," together with a portrait of the author, Dr. Clement Moore. No better New Year's gift could be made to a young friend than a year's subscription to *Harper's Round Table*. Price, \$2.00. With SCHOOL JOURNAL, \$2.85.

SHAKESPEARE THE BOY.—By William J. Rolfe, Litt. D., New York: Harper & Brothers. 250 pp. Price, \$1.25. Dr. Rolfe, with whose excellent edition of Shakespeare all students are acquainted, has rendered a valuable service to the literary world in this book entitled "Shakespeare the Boy." He has made a study of the games, the schools, the amusements, the duties of the boys who lived in the time of Henry VIII and as far as possible shown how the boy, William Shakespeare had a part in them. The book gives the early history of Stratford-on-Avon with its local traditions and organizations, and the style and manner of living of people in Shakespeare's walk in life. Dr. Rolfe quotes liberally from the plays of the great dramatist, showing how his writings were colored and shaped by his boyish experiences. Considering the crude surroundings of the boy Shakespeare, one wonders how and where the foundations of his great plays were laid. His school days ended when he was but thirteen, and the only teachers he ever had were unlearned and unskilled. We can only conclude "*Poeta nascitur, non fit.*"

A HISTORY OF THE UNITED STATES. By William A. Mowry. A. M., Ph. D., and Arthur May Mowry. A. M.; published by Silver, Burdett & Co., Boston and Chicago. This book is a school book especially designed for class use in the schools, both public and private, of the United States. In the preparation of this history the authors have studied first of all to make an *accurate* history. To secure this they have consulted valuable records, and been advised by living historians who have preceded them in this field of American history. Many of our school histories devote one-third of their space to the colonial and early history of our country, and pass over rapidly the events which have occurred since, and have made the United States a great and powerful nation. The aim in the book under consideration is to give different periods their appropriate share of space and attention. This book has 115 pages devoted to the colonial period; 76 pages relating to the revolutionary period; 92 pages showing the development of the republic between 1781 and 1860; 50 pages upon the war of the Republic, and 47 pages to the events that have occurred since 1865. The mechanical

execution of the book is admirable. The illustrations and maps are numerous and beautiful; the paper is delightfully smooth and pleasant to the touch; the print is clear and distinct. It certainly must find many friends and admirers.

THE numbers of *St. Nicholas* for the past year, bound up in two parts, contain more than a thousand pages in all, and more than seven hundred pictures. Four complete, richly illustrated serial stories are "The Sword-maker's Son," by W. O. Stoddard; "The Prize Cup," by J. T. Trowbridge; "Teddy and Carrots," by James Otis; and "Sindbad, Smith & Co.," by Albert Stearns. Besides these, there are scores of stories, sketches and poems that make special appeal to boys and girls. Sarah Orne Jewett gives a glimpse of the Christmas customs of another land, and life in a famous country house in "Betty Leicester's English Christmas." "How a Street Car Came in a Stocking," and "Christmas White Elephant," are two other stories of the holiday that is sacred to childhood. Besides these, are many instructive and entertaining papers, stories about people and animals, tales of adventure, fairy tales, and other attractive features. There could be nothing in the way of reading matter more fascinating for the intelligent boy or girl than the pages of *St. Nicholas*. (The Century Co., New York. \$2.00)

AMERICAN ORATIONS. Edited, with an introduction and notes by the late Alexander Johnston, professor of jurisprudence in the college of New Jersey. Re-edited with new material and historical notes by James A. Woodburn, professor of American history and politics in Indiana University. *New York: G. P. Putnam's Sons.*

These orations run through four volumes, each complete in itself, and each sold separately. Historically the division of the work is (1) Colonialism to 1789; (2) Constitutional government to 1801; (3) the rise of democracy to 1815; (4) the rise of nationality to 1840; (5) the slavery struggle to 1860; (6) secession and reconstruction to 1876; (7) free trade and protection. The great speeches of the men who had a part in shaping our government along these lines may be found within these volumes. They have been selected with special reference to their value in throwing light upon the more important issues of American history, and to developing a sentiment of patriotism. Notes found at the close of each volume give a sketch of the life of each orator with a view of the political situation which was the occasion of the speech. Vols. I and II are now ready, bringing the history down to the midst of the anti-slavery struggle. Vols. III and IV are in preparation. Price of Vol. I, \$1.50; other volumes, \$1.25.

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1896.

## INDIANA STATE TEACHERS' ASSOCIATION.

FORTY-THIRD SESSION.—PLYMOUTH CHURCH, INDIANAPOLIS,  
DECEMBER 29, 30, 31.

On the evening of December 29, the meeting was called to order by the retiring President, Howard Sandison, of the State Normal School. After devotional exercises conducted by the Rev. C. N. Sims, the retiring president introduced his successor, James F. Scull, superintendent of the Rochester schools. After expressing his appreciation of the honors conferred upon him, Mr. Scull delivered his inaugural, of which the following is an abstract :

"An educated man has been described as a complete man ; strong, active, intelligent, wise, good, useful, and happy. Every educated man, then, is an evolution, having passed every stage from the monad to the complete man. He is the sum of all antecedent ages ; a unit in the aggregate of the ages to come. We have come to think that the end of nature, the culmination of all formative influences, is the production of man ; and that the highest thought we can have of man, is his continued approach in perfection toward the infinite. This movement must be through his own conscious efforts, in adapting himself to his surroundings, conditions, by more and still more making his environments a part of himself.

"Man ever approaches the continually receding infinite ; his evolution is continuous. In his nature such a thing as reaching the end is not known. This moving toward perfection must be made not through forces without and beyond himself, but through conscious effort upon powers inherent and within himself. This is the end of education—The making of a Complete man.

"Education is to become the child's servant. All the machinery and appliances education can command are for its use.

"There is a something *of* this creature and *in* this creature to be drawn out and nurtured. It has within its nature all the tendencies of ancestral ages and the possibilities of the ages to come. The first agency is the mother. As a supplementary scheme to the home education came the kindergarten. He recognized the necessity for kindergartens, as they supplied help to mothers overworked with other duties.

"The second agency in the education of the complete man is the school. There is no good in teaching that is not performed intelligently. There is a difference between the teacher who loves her art and the one who goes to her duties as a means of earning a livelihood solely. We need teachers who feel divinely called to teach. This, supplemented by proper training, gives us the artist."

He said he believed women best fitted for teaching in primary departments, but that there are periods when the boy needs the example of vigorous, robust manhood.

At the close of the address, President Scull was warmly applauded.

In a well written and practical paper, Mrs. Sarah Tarney-Campbell, assistant superintendent of the Anderson schools, made an earnest appeal for

#### "CLOSER SUPERVISION OF COUNTRY SCHOOLS."

"In the first place, there is probably a much larger per cent. of young inexperienced teachers in the district schools than in the graded schools. Second, as a usual thing better wages are paid in the graded than in the country schools. In the third place, the ambitious teacher feels she can do better work in a graded school where she has but one or two grades and where she is in daily contact with other persons doing work similar to her own and where she can have the advantage of the frequent visits and help of the superintendent. Finally, district teachers usually lack special training. The students that graduate from training schools seldom go back to the district schools; nearly all find positions in the graded schools. This is a hasty view of the teaching force in the district schools.

"Now as to the direct help provided these district teachers. There are 10,000 district teachers in the State and 92 superintendents. Everywhere the superintendents say it is impossible to visit even the poor teachers often enough to help materially in their work.

"Here are some of the suggestions that have been made as to further help in the district schools. State Superintendent Geeting recommends that all manuscripts for teachers' license be examined by the State Board. Such an arrangement would relieve the county superintendent of a great part of the clerical work, and enable him to give his time to the schools. This may answer in the smaller counties but would be entirely insufficient in the larger counties—Madison, for instance, where there are 187 district teachers scattered over 450 square miles. The plan of allowing the county superintendent a clerk has also been discussed as a plan by which the county superintendent has all his time for supervision of the actual teaching work. It is also suggested that there should be a supervisor for each township, or if the townships are small two or three may be combined and one person supervise the work.

"Somewhere in the scheme of work, some provision should be made for the township high school, which would be a feature of country school work in every part of the State. The supervisor of the township schools may have some connection with this township high school.

"These are the plans that have been receiving some little attention from persons who understand the needs of the district schools."

President Scull announced the following committees :

On Resolutions and Memorial : J. W. Carr, Anderson ; W. D. Weaver, Marion ; W. H. Hershman, New Albany.

On Reading Circle : F. L. Jones, Tipton ; G. M. Naber, Columbia City ; W. H. Hershman, New Albany ; J. H. Reddick, Winamac ; J. W. Carr, Anderson.

To Further Indiana's Interest at the Next National Teachers' Association: W. R. Snyder, of Muncie, president of the Northern Indiana Teachers' Association; W. H. Senour, president of the Southern Indiana Teachers' Association; State Superintendent Geeting; the president of the next General Association, (R. A. Ogg).

It was moved and seconded that this Association appropriate \$50, payable to the above committee, to be expended in the interest of the National Teachers' Association, and that the Northern Indiana Teachers' Association and the Southern Indiana Teachers' Association be asked to appropriate \$25 each, to be expended for the same purpose.

After adjournment, each congressional district selected its members of the committee on the nomination of officers as follows: First district, Chas. N. Peak, Princeton; second, W. E. Alexander, Bedford; third, Bertha G. Wolfe, Jeffersonville; fourth, T. E. Sanders, Portland; fifth, A. R. Charman, Terre Haute; sixth, W. E. Wineburg, Richmond; seventh, R. A. Trees, Indianapolis; eighth, I. E. Neff, Portland; ninth, M. H. Stuart, Sheridan; tenth, J. W. Hamilton, Monticello; eleventh, J. N. Myers, Wabash; twelfth, I. A. Mellendy, Angola; thirteenth, J. B. Lemasters, Kewanna.

WEDNESDAY MORNING, DEC. 30.—After singing under the leadership of W. E. M. Browne, devotional exercises were conducted by Rev. M. L. Haines, Pastor First Presbyterian Church, Indianapolis.

In the general Symposium on child study, Noble Harter, of Brookville, read the first paper, entitled

"THE CURVE OF EDUCATIONAL ADVANCEMENT OF SCHOOL CHILDREN," the synopsis of which follows:

The aim of child study is to discover and formulate fundamental truths respecting the nature and growth of mind as affected by its environment, and their application to the problem of the school. We may expect to increase the efficiency of the school only through a better understanding of method, as determined by the child's essential nature.

One of the most promising means of obtaining this more intimate knowledge deals experimentally with the child. The details are carefully planned and carried out with scientific exactness. Among the many problems which may be so investigated none possesses more teaching value than that of the nature of mental growth. This is the real test of the school worth. As it must be measured or estimated from time to time in every system, a better knowledge of its nature is important.

This progress cannot be more than roughly approximated, and every device is far from satisfactory. The complex nature of studies and their interconnection with the whole content of mind makes advancement difficult to estimate. The language of telegraphy is singularly well adapted to this end, it is as free from other mental occupation as seems possible in any case. Studies carried on during three and a half years along a number of different lines or sources, have resulted in the plotting of the typical curve of learning for this language, which is thought to be quite similar to that in learning any subject. At first the rise is rapid, soon slowing down until a comparatively level part or plateau is reached where progress seems to be at a standstill. This is terminated by a somewhat abrupt rise, which is followed by a decreasingly gradual rise to the highest ability.

The plateau is the important part. It is a discouraging epoch, which requires much patience and practice, and one in which the teacher's skill is most needed. Advancement is believed to be going on, notwithstanding

the apparent standstill. While the silk-worm in the chrysalis seems dormant, structural modifications are being made, which finally become manifest. So it is with the learner. When the cerebral modifications necessary to a higher way of grasping the subject are completed, measurable growth becomes manifest.

The apparent lesson to teachers is that of the pressing necessity of consistent and painstaking effort as a means of realizing the potentiality of the individual. The tendency too often is to depend much on the selective activities of the child to determine the amount of work necessary to be done. Too much may be demanded of the child, but he can not get something worth having without corresponding effort. In short, it is *supreme* effort that educates.

This paper was accompanied by charts, illustrating the "Curve of Educational Advancement." The paper showed the writer to be a keen observer and an original investigator.

The second paper,

#### "EFFECTS OF PHYSIOLOGICAL CHANGES ON CHILDREN'S ABILITIES,"

was read by John M. Culver, Indianapolis Manual Training School. Subject:

*Bodily Changes.*—1. Development of nerve cells.—There is a gradual increase until eleven years, then there is rapid increase, followed by gradual increase until thirty-three years.

2. Variation in death rate differs for boys and girls.

3. Variation in ability to resist disease is greatest in the twelfth year for girls, and thirteenth for boys.

4. Variation in the growth in height. It is most rapid for girls at eleven and twelve; for boys at thirteen and fourteen.

5. Variation in the rate of growth in weight. It is most rapid for girls from twelve to thirteen.

Children's abilities to reason as determined from a study of tests on common problems show the same variations between boys and girls as the variations in bodily changes. The paper was practical and well received.

#### "ENCOURAGEMENTS FOUND IN CHILD STUDY"

was the subject of a paper presented by Mrs. A. R. Hornbrook of Evansville. Among other interesting things she said:

"Human conduct is motivated by impulse and reason. Our educational system is the outcome of noble impulses. Certain opinions concerning the nature of the child and of his needs form premises of the reasonings which have led to our own present educational arrangements. It is a matter of encouragement that these opinions are to be replaced or re-inforced by the results of scientific observation and deduction.

"The child study movement will improve the status of teachers by placing their occupation in the list of those which are based upon scientific research and insight.

"Men and women of wider culture are thus attracted to the profession. It arouses the interest of parents and secures their co-operation. It creates a demand for teachers who have special professional knowledge and enthusiasm and secures a recognition of their services. The recognition of the various personal abilities and disabilities of children will result in more reasonable and better adjusted requirements for teachers' work on the part of parents and supervision. The sympathetic insight into child nature which results from child study and the more intelligent adaptation of work to the needs and abilities of pupils will sweeten and enliven the mental and moral atmosphere of our school-rooms.



"The child study activity is one of those modern movements which are encouraging to all because they show that society is coming to a knowledge of what it needs and is trying to find a rational basis upon which to work towards its ideals of human perfection. It is an attempt to come into line with the eternal verities, for in dealing with child nature, the purest and most delicate material with which it ever works society is throwing away the pattern furnished by more or less distorted adult consciousness, and humbly, patiently and sympathetically trying to learn the Divine purpose working out in each individual child."

**"HOW CAN CHILD STUDY BE MADE MOST USEFUL TO THE PUBLIC SCHOOL TEACHER?"**

was discussed by Dr. W. L. Bryan, Vice-President State University. As Dr. Bryan came forward to speak he was greeted with hearty applause. He said :

"In the twenty minutes that fall to me, I wish to suggest a few things which I hope may prove immediately practical. I shall, therefore, take no time to defend child study, or even to state my own faith in it.

"If any one is yet unconscious of the necessity for child study, scientific and unscientific, I will make to him, at present, only the answer which Mr. Moody made the other day to a club of infidels who challenged him to a debate upon the merits of Christianity. Mr. Moody replied in substance—'When tens of thousands are going down every week to the grave of the drunkard and the harlot, I have not time for disputation. If your club has some better gospel than mine for men, follow me into the slums.'

"In like manner, I say, if any man has something better to propose for the saving of the children than to get accurately acquainted with them, set your proposition to work and may the blessing of Heaven be with you. I for one will want to be one of your disciples.

"To-day, I have simply to propose two or three questions, which common sense and the progress of science show to be important and which an individual teacher or a group of teachers may use in the work of the school.

"Let one of these questions be: Are the purely physical conditions in my school right? Is the heat right; just enough and even? Is the ventilation good? Are many of the children having colds and headaches? Does the school grow drowsy and stupid with the day? When you come back to school after dinner, does the air strike you as church air that has been kept sacredly since dedication day? If these things are not right, suppose you try this: Have some bright, bad boy help save his own soul by keeping a temperature record several times a day for a week or so, and, if your wealthy superintendent will buy for you one of those little affairs for measuring the carbonic acid gas in the air, get a record of that also. If these records are unsatisfactory, have them framed and presented to the school board. If the school board will do nothing, the lives of the children will be upon their heads not yours. If an outcome of your attention to the matter is any degree of improvement in these conditions, the whole life of your school will be every way better.

"The second question I have to propose is this: Does anything that I am doing in my school attack the nervous capital of the children? In dealing with the question, a few simple physiological facts should be known—every man has in his brain and spinal cord a bank, where the forces that build up life are constantly making deposits of force; every motion, every pulse beat, every thought helps spend that force; that the most important thing for any soul on this planet is that his account in that bank of nervous energy shall be on the right side of the ledger; that the greatest disaster which can happen to any one is the establishment of habits, which become life-ways for the waste of the precious capital of life and so far remediless bankruptcy.

"Now, what is going on in my school that may establish such habits? Do I fail to hold the reasonable attention of my pupils, and am I establishing in

them the habit of mind wandering? Am I, on the other hand, one of those hypnotic teachers who keep the attention of the children with mesmeric intensity? Is it my pride to see and to show visitors how the little ones will wriggle and squirm with interest? Are the children catching my nervous habit, my restlessness, my noisiness, my sourness, or are they taking from me charms and graces that will bless men when I am dead or—married?

"What is the effect of all the machinery I use to stimulate work—grades, the roll of honor and all that? What is the effect of all these things upon the few who are striving to be first? Does all this apparatus leave the majority untouched and overwork a few? Are there some who sit up late, drink tea to keep awake; have mother hold the spelling book? Read McClaren's 'A Broken Bow.'

"Right here, I wish to express the wish that the superintendents would have a meeting for prayer and the confession of their sins. I have no time to discuss the matter, but I should like to put it thus: I am a superintendent. I have in charge twenty teachers. There is a great work for these teachers to do. There is no way to make that work easy and also good. The birth of a child through the school cannot come without travail. It costs life. But just because there is so much to do, and because these teachers have only mental power, let us consider well every requirement I make of them. My twenty teachers have just so much strength and no more. Let us save every ounce of that strength for real uses, as a general saves the strength of his soldiers for the battle. Let me bring my whole precious outfit of rules, regulations and reports together, and considering well, first, which of them are so really useful that they must be kept and which of them are mere flummery and vain glory, let me offer them up in the office stove—a holy sacrifice before God.

"The third and last question I propose is this: Do I know what my children are thinking about? No more important thing has been said in psychology in twenty-five years than what Mr. Dewey is now saying about the imagination. Mr. Dewey says that the stream of thought, perceptions, memories, reasonings, what not, is in fact a stream of images. The most essential condition for speaking to any soul in the jury box, in the church pew, or in the school, is to know by sympathetic imagination the actual character and course of the imagery going on in that soul. To know the laws of the soul as Kant knew them with the understanding is excellent. But to know the ways of the soul as Shakespeare knew them with the imagination is to be an artist-master. I say, on psychological ground, that to have Riley's power to divine the child soul is worth more to a teacher than to know all the theoretical psychology, scientific or philosophic, in the world.

"Now have you got the power in any degree? Do you know with any accuracy just how your children think about the things they are doing in school? How can you become better acquainted with them?

"But of all be sure that you cannot come to be best acquainted with any child by any perfunctory process. You must want to get acquainted with them, with something of the same intensity that you want to get acquainted with your lover.

"But there are some devices. For one thing, you can learn a great deal from the children. Don't get over-vexed at mistakes. A mistake generally means that your stream of thought and the child's stream of thought are not just then moving the same way. A mistake is a revelation. Don't be over-vexed. Con over the thing to see what the matter is.

"What do the children remember? Mr. Clark, of Boston, asked about 2,000 children to write a little essay on what they remember and what they prefer of the last year readers.

"In each of our State readers there are a good many selections which no child out of hundreds remembers. In most cases, these pieces that no child remembers moralize. They are very good in themselves, but for the children they are good for nothing.

"Give the children every chance to do original work and consider well what they achieve. My colleague, Mr. Weatherly, is suggesting questions in history such as this: What reason have you to believe that the Indian ever lived in your country? Or, if you should find upon a desert island, a cabin, a canoe and a broken arrow, what would you think of the people who had lived there? I have been suggesting this, that instead of reading to children the whole of a new story, read part of it and let them try to finish it. Let them in this manner, so far as possible, study literature, not to pick it to pieces but to create as the artists do, and then do you consider well what they can achieve. And let me say in passing, I believe this an excellent exercise for the teacher.

"I have tried to make this talk as practical as possible by suggesting concrete questions for study. Short as my talk has been, you will probably not remember much of it. Forget it all if you please but this: If you are going to do any sort of child study that is worth while, you must have some wise question in your head.

"A divine question is just as precious and just as hard to find as a gold mine. It is easy to get worthless questions, particular questions: What color is Johnny's hair? Or general questions: What is the nature of Johnny's intelligence? But to get questions that are both general and particular—questions that will make the Sphinx open her lips is not easy. Get some such question from whatever source, from science, or philosophy, or poetry, or from your own soul and live with it. When you have looked at the children for a year and a day, with a divine question in your eyes, the day will come when your eyes will be opened and in the face of the child you will see the face of God."

In the discussion which followed these papers, Miss Belle Thomas, of Chicago, spoke enthusiastically on the subject, and urged that interest be taken in the association for child study, which is to be formed this afternoon. She said the School of Child Study of Illinois had done more for the education of Illinois than any other one thing.

After a short recess, Supt. W. P. Shannon, of Greensburg, in a carefully prepared paper, discussed

#### "NATURE STUDY IN ELEMENTARY SCHOOLS."

Nature study cultivates the power of observation. It gratifies the child's curiosity. It makes friends of child and teacher. It improves the child's language. It makes geography and physiology less book studies. It gives real knowledge about nature.

How shall we introduce nature study into the schools?

Gradually, not all at once.

Directly, not through books.

Independently, not correlated.

R. Ellsworth Call, Superintendent of the Aurora schools, opened the discussion. In the course of his remarks he said:

"It is assumed at the outset that Nature Study, in at least two of its forms, now recognized as an essential part of the work of the elementary school. What part must be determined by the needs and opportunities of the various communities.

"It is generally assumed as a principle of good pedagogy that no one should attempt to give instruction in subjects he does not himself know. Especially true is this in nature work. Not only should the teacher know general subject far beyond the possible limits within which he is to give instruction, but the particular item for the lesson of the day or the week should be carefully thought out and developed.

"I do not wish to seem controversial or to precipitate useless debate, but it does appear to me that the nature work outlined in the proposed uniform

course of study for the schools of our State departs as widely as possible from what such a course should really provide. It can not be successfully pursued in Indiana schools. The course errs in assuming an amount of information in the teacher which our teachers do not and can not possess. It errs in the sequence and importance of the subjects selected. It errs in making uniform the work required, which must always be determined by the environments of the schools. Rather than being in any case specific, the work proposed should be the most general possible. For the most part its observational side, so far as gross structure and the unit relations are concerned, should have been more greatly emphasized. It does not answer the objections nor cancel the errors to say that the proposed course is suggestive rather than definitive; that it is not mandatory. If such be the position taken, the uniformity at which it professedly aims is not only not attained, but each instructor or supervisor becomes a judge of both matter and method and we had as well have no course at all.

"Nature work should proceed along the simplest lines possible, and concern itself with intelligent study of common phenomena.

"It should confine itself to a few only of the plants to be studied, and these should be carefully made the basis of work which may later assume definite shape in the child's mind and lead to independent observation.

"Nature work is not necessarily science. It is not classified knowledge. It is simply intelligent observation and carefully directed questioning.

"It is quite immaterial what particular line of work commences your course so long as that course begins with botanical matters as being facts within the ability of the child to see, and about which he can reason. Animals should be last and least in the whole scheme of work. It is not because children know most about them that this course is urged, but because they know least.

On motion of W. A. Bell, Mr. A. C. Shortridge, a charter member of the Association, and the first Superintendent of the Indianapolis schools, having paid his dues for forty-two years, was made a life honorary member of this association without dues.

On motion of R. A. Ogg, of Greencastle, the President was instructed to send congratulatory telegrams to all the State Teachers' Associations now in session. Adjournment.

WEDNESDAY EVENING, DEC. 30. The program opened with a vocal solo by Mrs. A. Van den Ende, of Columbus.

The annual address was delivered by Rev. Jenkin Lloyd Jones of Chicago, on

#### "THE VALUE OF AN IDEA."

"Travelers in Wisconsin have named a towering barren rock, resting on a narrow ledge of sandstone, 'The Stand Rock.' Out of the center of this rock", said he, "there is growing a solitary pine tree, a tree that has grown very old in reaching a height of about four feet—a poor dwarf whose life has been a conflict and a battle. Poor little pine hunchback! Rain does not stop with you, but hurries on to the glades below. The heats of August have blistered you. Poor hermit, we sigh, fit symbol of many lives—of all lives."

"Life is once and forever a struggle. The most important and the most difficult lesson of life to learn, is that everything has its price, that everything has its high price and that every best thing has its highest price.

"The infinite never sells his wares below cost. He offers no chromos to tempt subscribers for the journal of knowledge. All worth is won by suff-

ering from the precious pearl in the oyster to the trembling lines of the poet. More and more as you read the heart secrets of Mother Nature you will discover that conflict is her method and struggle is her song. Progress unfurls her banner only upon the battle fields of God. This is true from pebble to planet; the one was rounded between crushing glaciers and relentless rocks; the other born out of elemental turbulence condensed and shaped from formless nebulae. This same process is still going on; it is being exemplified tonight as the thoughts of God are being formulated into new worlds in the distant fields of space.

"Ideas are expensive; first, because they are hard to get; second, because they are hard to hold after acquired."

Dr. Jones then proceeded to speak of the struggles of great musicians, artists, sculptors and painters. "Would you find the secret of literary power?" asked the speaker. "Find it as Dante found it. Walk the streets with burning eyes and emaciated face, hearing skeptics shout: 'There goes the man who has seen hell.' Ask Milton and Bunyan the cost of an idea. They will answer, sorrow, blindness, suffering, imprisonment, and death. 'That child is a born genius,' says a proud parent. 'Not unless he is a born worker,' say I."

In speaking of an idea as hard to hold after one gets it, the lecturer reviewed the terrible experiences of inventors, scientists and scholars who fled for their lives from the persecutions of the ignorant and superstitious, who regarded them as in league with the evil one. An old Scotch woman who found she could see better through two pairs of spectacles than one was burned for a witch, because she had a new idea. Scarcely less attractive was the fate overtaking a man who believed better plowshares could be made of iron than of wood. In American history there is the picture of Lloyd Garrison with a rope about his neck, in the streets of Boston, for proclaiming a new idea.

"Every week ideas go begging through our towns for recognition," he said. "The cost of an idea—time, labor, and money spent in securing it; sorrow, suffering, and, sometimes death, in holding it. Does it pay to invest? Shall we risk so much for an idea? In answering this question, each person should consider, first, what is the reward; second, what is the cost of doing without it?"

Referring to natural history, he said: "The savage wolf of the forest, plus an idea, becomes a gentle Newfoundland dog; plus another idea, the sensitive pointer, obedient to the voice of his master. Ideas shaped the uncouth country boy on the streets of Philadelphia into the polished diplomat—brilliant figure in the courts of Europe. An idea changed the canal boy into one of the most revered of all American Presidents. Plant a poet's idea in the heart of a reckless, despairing man, and you have done more for him than you dressed him in broadcloth or made warm his Sunday pottage." He spoke of what ideas had done to lessen the burdens of mankind. The modern power loom does the work of 3,000 weavers.

"Take the idea into the school-room," said the speaker, "and teach the boys and girls of Indiana its cost, and how to hold it after they get it."

The large audience gave close attention during this most excellent address, and at its close a hearty vote of thank was tendered Dr. Jones.

W. A. Bell, Indianapolis; R. A. Ogg, Greencastle; R. I. Hamilton, Huntington, were appointed a committee to bring teachers wanting places and superintendents wanting teachers together.

A reception at the Denison closed the session.

THURSDAY MORNING, DEC. 31.—The session opened with the singing of the "Lord's Prayer" by the audience, after which devotional exercises were conducted by Rev. G. A. Carstensen, Rector of St. Paul's Church.

The president read congratulatory telegrams received from State Teachers' Associations in session in Illinois, Iowa, and Wisconsin.

The report of the Legislative Committee was then read.

*To the State Teachers' Association:*

The legislative committee appointed by your honorable body, begs leave to make the following report:

It is the judgment of this committee that the General Assembly should be petitioned to enact the following legislation:

- (a) Making the minimum school term of the district schools six months.
- (b) That educational qualifications for County Superintendent be required, that the term be extended to four years, and the office be made a salaried office.
- (c) That educational qualifications for City and Town Superintendent be required and that the term of said Superintendent be four years.
- (d) That all teachers' licenses hereafter issued, be declared state licenses, the rules governing examinations to be under the management of the State Board of Education.
- (e) That the State Board of Education be enlarged by the appointment of two County Superintendents; such appointments to be made by the Governor.
- (f) That a district school library system be enacted.

Respectfully submitted,

D. M. GEETING,  
Chairman of Committee.

The report was adopted as read.

"THE TEACHER'S PERSONAL INFLUENCE AS A FACTOR IN EDUCATION" was ably portrayed by Miss Mary Doane, Purdue University, Lafayette. In her discussion of the subject, she showed that the difference between the real teacher and the unreal was that of personal influence. She said that to be able to impart facts with exactness, and to possess the power of explaining clearly did not make the true teacher. The teacher is to act as a guide, as an inspirer. The manner of imparting this inspiration depended upon the *personality* of the instructor.

The writer suggested that personal influence was the one great factor in governing, be it in the school-room or in the college community; that wisdom needed no badge of authority to enforce its mandates. Personal influence must take high rank among the various factors in education, when one considers that the impress made by the teacher is yet fresh in the pupil years after, when he has left college, and the facts he may have learned have long been forgotten.

A discussion of the place of personal influence in our educational system followed. The writer thought that with our present careful supervision, the

problem lay chiefly with the teacher himself. It has been suggested that in every school, especially in every college, there should be a general adviser for the students; far better would it be to have, as members of the faculty, personalities, strong and experienced enough to fill this office in a natural unofficial way. Never can a teacher measure the expansion of mind which may come to the student in one year's work; never can he tell the boundless development of individual character which he may be able to inspire.

R. A. Ogg, superintendent of Greencastle schools, in his discussion of this subject said that he would sum up the paper in two words—inspiration and genuineness. A higher law than that of duty is the law of love. The teacher must be in close touch with the young life that he would lead upward. That teacher full of true love will best develop the child. He said that the teacher must be genuine, otherwise he cannot determine the character of his pupils. All imitations are lifeless. The teacher must give up his whole self to his work or he will fail to call forth that responsive thrill from the minds of his pupils.

Miss Marie Dunlap of the Lebanon high School read a paper on

#### "THE TEACHER'S PREPARATION."

"A minister visits the school-room of boys and girls and says: 'Learn your lessons, be diligent in getting an education so that when you are grown you may make your way in the world.' The farmer says: 'Get an education, boys, so that you won't have to work so hard as I have done.' The statesman says: 'Now, boys, work hard, learn all you can, and some day you may be president.'

"Is this, then, the aim of education—worldly gain, money, position, power? Minister, farmer, statesman in these days of greed lose sight of the fundamental aim—the development of character.

"Before us sit the children, endowed with their various talents, inheriting good and bad tendencies, awaiting the guidance of the teacher.

"The teacher must be sympathetic, sincere and in love with humanity and nature; striving towards an ever present and lofty ideal.

"In these days of research, it is a recognized fact that a man cannot know everything. Then let him know *well* something. Besides his specialty, the teacher should possess general information. He should at least know where to find the information he or his pupils may need.

"Let our aim be to make of the boys and girls good citizens; to train them to honesty, self-control, self-reliance and magnanimity."

J. M. Scholl, superintendent of the Milton schools, opened the discussion. He emphasized the facts that a teacher should possess thorough knowledge, a broad education, and moral character. A teacher should be honest with himself; honest with his pupils.

T. N. James, principal of the Brazil high school, continuing the discussion, said that history was replete with examples of impress that teachers leave upon their pupils. Homer never forgot his Aristotle. Morton never forgot his Hoshour. Mr. James then spoke of the influence of Agassiz upon lives of his students.

L. G. Alford, of Purdue University, said that there is something else besides the intellectual knowledge, and professional training of teachers. It is preparation of character. The teacher is often given to fads. We run Herbertianism. Are we so small that we let fads take possession of us — and soul? There is something more important—character. In our

efforts to do good work, we must make the sacrifice; we must sacrifice *all* for the elevation of those who come under our influence. A teacher should cultivate the broadest altruism, and thus be able to leave an impression on the civilization of which he is a part.

Miss. M. E. Nicholson, director of the National Teachers' Association, gave a short talk on the growth of the National Educational Association. She suggested a closer relation between this Association and the National Association.

W. R. Snyder, State manager of the National Association, urged a greater interest in the National Association on the part of Indiana. He said the book reports but forty-four members for this State. Other states to whom we would not bow educationally are far ahead of us in membership.

Dr. C. R. Dryer, of the State Normal, was unable to be present on account of sickness. His scholarly paper, entitled

#### "THE NEW GEOGRAPHY,"

was read by F. N. Stalker, of Terre Haute.

1. Its philosophy is not teleological, but evolutionary. It is no longer anthropocentric, but geocentric.

2. The new geography is scientific and rational. It studies not only facts, (which are stupid things) but the relations between facts.

3. The new geography has been enriched by the addition at the bottom of the new science of geomorphology and is thus brought into close alliance with geology.

4. The new geography forms a connected chain between the purely natural sciences and the humanities; but being preponderatingly a natural science it must adopt the scientific or laboratory methods of study and teaching.

5. Thus the new geography becomes able to give, not only information, but scientific training; the ability to discover facts and to see their relations. It converts geography from a lifeless bore to a living interest, from a dead grind to a delightful activity. It takes it out of the list of memory or "useful knowledge" studies, and plants it in the quickening current of modern scientific thought.

6. It is only when built upon "the solid ground of nature" and inspired by the scientific spirit that geography can hope to solve the problem of Ritter and Buckle, the problem of the relation of man to his physical environment, and thus become in fact the physical basis of history and sociology.

7. Special means must be adopted to prepare teachers for this kind of work. On account of lack of special training and lack of facilities for obtaining it, educational progress in this direction will be slow; but the new geography has come to stay, and teachers and school officers will do well to recognize and welcome it.

I. V. Busby, Superintendent of the Alexandria schools, discussed this paper. He readily accepted the definition that "geography is the science which deals with the mutual relations in space of *relief, climate and life*." Mr. Busby then proceeded to discuss the different contributions from the sciences that such an inclusive definition solicits. The writer felt that the severe judgment pronounced by Dr. Dryer on the results of present geographic study was fully merited. He is of the opinion that the dogmatic methods that are the forced heritage of the lay teacher will continue to prevail until the tenets of this "New Geography" will have found expression in better training of teachers on the one hand, but above all else, when the



text-books on this subject—the most potent of all teachers—exemplify, even in minimum, the nature and scope of such geographic research as will induce the pupil of our grades to use his hands, his eyes and his ears—to observe and think.

The chairman of the Committee on Resolutions made the following report, which was adopted :

*Resolved*, That the Indiana State Teachers' Association approve and support the proposition of the State Board of Charities to separate the Reform School for Girls from the Woman's Prison, and to provide for the better care of the 3,500 dependent children of Indiana. We hereby pledge ourselves to exercise our influence with our legislators for the passage of these very desirable measures.

This committee being also a Committee on Memorial, presented the following resolutions, which were adopted :

Since the last meeting of the Indiana State Teachers' Association we have been called to recognize our loss in the death of five of our most efficient members, viz.: Miss Helen M. Sanxay, one of the leading teachers in the city of Madison, and Secretary of our Association; Supt. J. R. Starkey, of Martinsville schools; J. A. Marlow, for so many years County Superintendent of Sullivan county; J. W. Layne, an ex-Superintendent of the city schools of Evansville, and Mrs. Susan Patterson, Superintendent of Union City schools; therefore

*Resolved*, That we express in this resolution our acknowledgment of their worth as living, active agencies for good, not only as members of our Association, but as members of society and in their individual capacities in their respective fields of labor.

That we recognize our loss, and renew our faith in Him that transports to a higher life; that we solemnize this occasion and adopt this resolution by rising to our feet and standing with bowed heads for the space of one minute.

The committee on nominations presented the following names for the ensuing year, which were endorsed by the Association.

President, Superintendent R. A. Ogg, Greencastle.

Vice-Presidents: C. E. Morris, Salem; J. A. Carnagey, Columbus; J. N. Scholl, Milton; O. R. Baker, Winchester; F. F. Heighway, Crown Point; E. G. Machan, Lagrange.

Recording Secretary, Miss Emma B. Shealy, Delphi.

Permanent Secretary and Treasurer, J. R. Hart, Lebanon.

Executive Committee: T. F. Fitzgibbon, Elwood; F. D. Churchill, Oakland City; J. P. Funk, New Albany; B. A. Ogden, Terre Haute; B. F. Moore, Frankfort; W. H. Sims, Goshen; J. M. Culver, Indianapolis; F. M. Charles, Mariou; W. A. Hester, ex-officio, Evansville.

The committee on Reading Circle Board recommended the appointment County Superintendent W. B. Sinclair, and the re-appointment of Mrs. Emma M. McRae. Carried.

A motion carried that a committee be appointed to audit the accounts of Reading Circle Board, and to report a plan of permanent organization for Board not later than the next annual meeting of this Association. The president appointed R. I. Hamilton, of Huntington; H. G. Woody, of Tomo; J. O. Lewellen, of Muncie.

J. R. Hart, permanent secretary of the Association read his report, which was accepted and placed on file.

On motion carried, the Primary Teachers' Association was admitted as a section of the Indiana State Teachers' Association.

On motion that duly appointed delegates from the Indiana State Teachers' Association be in attendance at the meeting of the Library Section in Milwaukee next July, the president appointed the following: W. A. Hester, Evansville; R. A. Ogg, Greencastle; F. A. Cotton, Indianapolis.

No further business being presented the Association adjourned.

J. F. SCULL, *Pres.*

EMMA B. SHEALY, *Rec. Sec'y.*

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### HIGH SCHOOL SECTION.

The High School Section of the State Teachers' Association held its annual session at Plymouth church, Wednesday, 1:30 P. M., December 30, Miss Martha J. Ridpath presiding.

The first paper, "*Matter and Method in the Teaching of Physics*," was given by Wilbur A. Fisk, Richmond. The aim of science teaching is to gain power. Physics cultivates careful, accurate, exhaustive observation, awakens a spirit of investigation, and cultivates imagination and reasoning.

The four methods used were given, the didactic, the lecture table, the working laboratory, and the last, the union of these three, the method commonly used. The pupil spends about half his time in experiments, the rest in recitation on text, on the experiments, and the teacher accompanies the recitation with qualitative experiments. The criticism of laboratory notes should be personally done at time made. Classroom work should keep in advance of laboratory work. The text-book should be scientific, mathematical, rather than phenomenal, brief, up to date, supplemented by good reference library. Laboratory work should be quantitative. The speaker compared the collective and the separate laboratory methods, thinking the first is the ideal one, but requires too much apparatus; the second, however, has the advantage of putting no restraint on the bright pupil. Note book should be clear, with accurate conclusions, usually mathematic. This will lead to closer observation and sharper conclusions, a habit worth years of toil.

The discussion was opened by O. R. Baker, Winchester, who agreed with Mr. Fisk, in the main, but thought the text book should not be too mathematical. The High School pupil is too immature, much of the teaching is over the heads of all but the brightest.

The tendency to make Physics more mathematical was discussed. Mr. McCracken of Elkhart thought the multiplication of problems in Physics belongs to the college or university course. Mr. Fisk's answer to the objection that he exalts the mathematical part of Physics at the expense of the phenomenal, was, that the class room work should be mainly qualitative, the pupil's work in the laboratory should be quantitative.

The second paper, "*Language Study as an Auxiliary to English Literature*," was given by Miss Kittie Palmer, Franklin.

English furnishes training to all the powers of the mind. The method of studying biographies, committing elegant extracts, and reading verbose treatises on style, is obsolete. English in Secondary Schools must be based on requirements of higher schools. The ends to be attained are:—1. To form a taste for literature; (2) to cultivate the taste, if already formed; (3) to give true views of life; (4) to strengthen the faculties; (5) to educate the spiritual man. The study of language forms has a legitimate but subordinate place as means to end, which is the appreciation of the thought. To get a word out of philology and into literature, the pupil must try it in its "social relations;" see its meaning from the context rather than from the dictionary. The music of language, changes in rhythm and meter, figurative language, tone color, all are aids to the expression of the thought.

Miss Palmer objects to Prof. Tompkins's idea of presenting the theme before the embodiment. The immature mind of the pupil can not act so. The theme only gradually breaks upon him through study of the embodiment.

The first subject in the Symposium which followed was "*Discipline in the High School*" by Superintendent Ayres, Lafayette. The object of education is self-control. There should be a development in self-control from the primary school to the high school. Have few specific rules and avoid an issue if possible. It would be well for the high school to be centrally located so that the pupils feel themselves a part of the business life of the city. Have school life and social life separated so far as possible. Social life should center about the home. The teacher should recognize the pupil as on the same social plane as himself and the pupil's parents. This will help to develop the feeling of manhood or womanhood which is the end of high school discipline.

Miss Ridpath being called away, D. R. Ellabarger, Richmond, took the chair.

J. W. Hamilton, Monticello, next presented a plea for "*Psychology in the High School*." The objections are:—1. The course is already overcrowded; (2) the average high school pupil is too immature to pursue so abstruse a subject; (3) introspection is dangerous in the high school age. The speaker answered these objections by showing that it is a very practical study, has great disciplinary value, and has a distinct moral value. It is not too abstruse for the pupil who can take high school geometry; it is very necessary for the understanding of history, rhetoric and composition, literature; self-knowledge being the basis of all interpretation of discourse. Introspection in childhood and adolescence is dangerous, but it is natural. Youth will have times of communion service to which outsiders are not invited; let psychology direct him aright to stifle the low impulse and to cherish the noble one; it will help him to become a self-directing, rational being.

The author of the next paper being absent, the following number on the program, "*The Relation of History to Civil Government*," was given by C. Lane, Ft. Wayne. Civil government is an integral part of history. When child enters school, he has some idea of the township from conversation, that idea of a community of individuals having common interests must

be the basis for all his work in this line. But he needs to see the township in New England, the Roman Comitia, the Greek Ecclesia, the clan of the North American Indian, to understand its origin and development, then the fact that government institutions are a slow growth, not an invention, will be plain. He will not need to study civil government till late in the high school course, if the work has been well done in the grades; then he will have maturer powers, and knowledge of other countries, and will see constitutions as they were, as they grew, as they were at the end of the period, as they influenced the life of the people. The pupil will have more respect for the constitution when he sees that it did not leap full grown from the brains of Hamilton and Madison. It is made of seasoned timbers. Institutions in conformity with old customs will be strong, against old customs, weak. In this later course, the pupil will have a broader view of the path institutional development has followed.

The following members had been appointed as a committee to nominate officers for the ensuing year: I. E. Neff, Portland; W. H. Kelley, Bluffton; S. B. McCracken, Elkhart; E. O. Holland, Rensselaer; J. H. Hayworth, Edinburg. This committee reported as follows, and their report was adopted by the section: President, J. C. Trent, Indianapolis; Vice President, D. J. Troyer, Goshen; Secretary, Caroline Evans, Evansville. Executive committee: Chairman, C. S. Meek, Terre Haute; W. E. Miller, Portland; Mr. Taylor, Madison; Miss Hinsdale, South Bend; Miss Bennett, Marion.

#### ENGLISH AND ENGLISH TEACHING.

Probably the most interesting and profitable of the many meetings of Indiana teachers during the recent holidays was the conference between the college teachers and the high school teachers. The subject under consideration was the teaching of English. There were three leaders in the discussion, Prof. J. B. Wisely, of the State Normal School, Miss Sidelia Starr, of De Pauw University, and Mrs. —, of the Evansville high school. Several others took part in the discussion, and great interest was elicited. Without attempting to give any of the excellent thoughts of the different speakers, we may sum up the following points made:

1. There is, in every department of our school life, from the primary grade, to the post graduate students of our universities a most lamentable defect on the part of students in their ability to speak and write the English language correctly.

2. This is in great measure due to the environment of a great per cent. of our children in uneducated homes and among ignorant companions.

3. The teachers in the grades and in the country schools are not doing their full duty in attempting to overcome this evil before the pupil enters the preparatory school or the high school.

4. Most high schools have not a sufficiently large corps of teachers in English—the most important of all departments.

5. Many teachers in schools of secondary grade and in colleges who teach foreign languages, mathematics, science or history, are not careful to require good English, and thus they spoil much of the work which the English teacher tries to accomplish.

6. Examinations for passing grade in any subject, and for admission to college, ought to take into consideration not only the subject matter, but the correctness of the language in which it is written.

7. Every lesson in each subject ought to be also a lesson in English.

In conclusion, the committee appointed by the Teachers' Association, and the one appointed by the College Presidents, to consider and present a feasible plan for remedying the defects in regard to English teaching was continued for another year, and was requested to report at a joint meeting during the next session of the State Teachers' Association.

It is sincerely to be hoped that much good will result from these conferences.

SCOT BUTLER, *Pres.*

T. J. BASSETT, *Sec'y.*

#### READING AND ELOCUTION.

The fourth annual meeting of READING AND ELOCUTION was held at the State House December 31. There was a good attendance both morning and afternoon.

"Reading in the High School" was the title of the first paper by Miss Bertha Frances Wolfe, of Jeffersonville High School. The writer insisted that the most important reform now being agitated is that calling for the teaching of reading in the high school.

T. J. McAvoy read a paper on "Gesture and Its Limitations." It contained many practical helps for developing individualism in children, and strongly condemned teaching which produces mechanical results. He said—"Gesture is an art. Any gesture is the product of the whole physical apparatus, but the face must be so expressive that the action will be felt and not seen."

"The Literary Phase of Reading" by Miss Emma Z. Craig, of the Garfield School, Richmond, was much enjoyed. "Good oral reading is impossible without proper interpretation." Miss Craig's paper was very instructive.

Mr. W. N. Trueblood, of Earlham College, Mrs. M. W. Hamilton, Mr. Sherrick of Westfield, and many others entered into the discussions.

Mr. T. J. McAvoy was elected president for the ensuing year, and Miss Bertha H. Hosford, Teacher of Elocution in Edinburg Public School, secretary and treasurer.

THE CLASSICAL SECTION elected the following officers: President, Dr. Edwin Post, De Pauw; Secretary and Treasurer, Miss Cora Bennett, Marion High School.

THE ACADEMY OF SCIENCE elected the following officers: President, Dr. Jos. Gray, Rose Polytechnic; Vice-President, C. A. Waldo, Purdue; Secretary, Jno. S. Wright, Indianapolis.

THE PRIMARY TEACHERS organized a section choosing as President, Mrs. Sarah Tarney-Campbell, of Anderson; Secretary, Miss Anna Lufton, Richmond; Executive Committee, Miss Rabb, of Worthington, Miss Sadler, Shelbyville and Miss Trimbull, of Evansville.

THE ENGLISH SECTION, like several of the other sections, failed to send in a report. It had a good meeting though. It elected the following officers: President, W. E. Henry, Franklin College; Vice-President, Miss Beatrice Foy, Indianapolis; Secretary, E. O. Holland, Reusselaer.

THE MUSIC SECTION elected as President, Miss Charlotte Longman, Terre Hante; Vice-President, W. F. Browne, Carthage; Secretary, Miss Blanche Williams, Columbus; Executive Committee, Louis D. Eichhorn, Logansport; J. S. Bergen, Lafayette and W. J. Stabler, Richmond.

THE COLLEGE ASSOCIATION had a well attended and profitable meeting. The following officers were elected for the ensuing year: President, W. L. Bryan, State University; Vice-President, Cyrus Hodgkin, Earlham College; Secretary, Prof. Stevenson, De Pauw University; Treasurer, W. E. Henry, Franklin College.

THE LIBRARY SECTION of the State Association discussed many questions that had to do especially with libraries. It condemned the law that requires the donation of \$1,000 before a tax may be levied for library purposes. It prevents the establishment of many libraries. The following officers were elected for the coming year: President, Miss E. D. Swan, of Purdue University; Vice-President, J. C. Leach, Kokomo; Secretary and Treasurer, Miss M. E. Ahern, Chicago.

A CHILD-STUDY ASSOCIATION was organized with W. L. Bryan, of the State University as president; Howard Sandison, of the State Normal School, as secretary and treasurer. The president will appoint an executive committee. Great interest was manifested in this department of educational work. Miss Belle Thomas, of Chicago, was present and made some valuable suggestions as the result of her experience in the Illinois Association which is the most effective in the United States.

THE COUNTY SUPERINTENDENTS' SECTION passed the following resolutions:

*Resolved. First.* That we endorse the State Superintendent's recommendations as found in his circular of recommendations on the subject of "Township Graded High Schools."

*Second.* That we endorse the recommendations of the State Superintendent on the subject of "A School License Law."

*Third.* That we endorse the recommendations of the State Superintendent concerning school libraries.

*Fourth.* That we favor the following resolution on qualifications of county, city and town superintendents: "That a man to be eligible to the office of county, city or town superintendent of schools should hold a State license—life or professional—issued by the State Board of Education, or have served one term or more in the office and that the office of County Superintendent be made a salaried office."

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Teacher—"What is a synonym?"

Bright Boy—"It's a word you use in place of another one when you don't know how to spell the other one."—*Ex.*

## A VIEW OF THE TWO VOICES.

PROF. W. E. HENRY, FRANKLIN COLLEGE.

When the editor of the JOURNAL asked me to write upon Tennyson's "The Two Voices," I wondered what I might say upon the poem that has not already been said and that might also prove of interest to the teachers over the State when they shall come upon the poem in the Reading Circle work for the year. I concluded to speak of the poem from the point of view of the literary historian trying to discover its source.

Let us proceed to look into the nature of the times and circumstances which brought forth this poem. I know well how dangerous it is to put two facts together and call one cause and the other effect, but it is not unfair to do so when the great probabilities are strongly in favor of such procedure. I know also that some writers and some writings may be read independent of time and place and that others are incomprehensible out of particular times and places. Neither of these facts is wholly true of Tennyson, yet, I believe we have had very few great artists who, in theme especially, have been so subject and sensitive to the time in which they worked as was Mr. Tennyson.

The poem, "The Two Voices," appeared in the author's second volume which was brought out in 1833 and is, therefore, among his earlier works, for he wrote from 1827 to 1892. Few men live so long. So nearly as we know, the poem was written in 1833, but this is not significant unless we know something of the character of that year and those immediately preceding it. In the history of modern thought, the first three years of the third decade of our century stand pre-eminent. These three years are the Genesis period of modern life and thought. They are the cock-crow of a new day. In 1833, Tennyson was listening to *two voices*, and is it surprising when we recall what was opening in England around him? Every serious man heard at least two voices and some of them, I dare say, heard many more. The world was chaos and was trying to organize itself. We must look back two years from 1833. Brooke says: "The lull that preceded the storm of revolution was of short duration." The year of Tennyson's first volume (1831) was the year of the second French revolution and the second English revolution and "Three Days in Paris" and of the appearance of Lord Gray as

prime minister in England and the champion of the Parliamentary Reform Bill. It was the opening of the Liverpool and Manchester railway; it was the year of Lyell's "Principles of Geology" and Comte's "Positive Philosophy." Keble's "Christian Year" had been printed in 1827 and Catholic emancipation became a law in 1829 and forthwith O'Connell began to agitate for the repeal of the union and in 1831 the Irish church was called in question, and Ebenezer Eliot was preaching more powerfully than from any pulpit a new doctrine for the poor in his "Corn Law Rimes,"

"It is deadly power that makes  
Bread dear and labor cheap."

1833, the year of Tennyson's second volume which contained "The Two Voices," passed the Reform Bill, brought out "Tracts for the Times," proposed to emancipate the black slaves in the colonies, saw Faraday's experiments in electricity and heard Geo. Combe's lectures on popular education.

Tennyson grew and wrote amidst this condition. Is it surprising that he heard two voices?

But these facts are worthless unless they mean something in the life of the people. Let us interpret a few of them and but briefly.

The French Revolution meant when interpreted in terms of life, skepticism, religious infidelity, the tearing down of everything that is old—for, in fact, Rousseau said, "Whatever is, is wrong"—it meant conflict, and in the end it meant materialism and it is clearly apparent that materialism is one of "The Two Voices."

The Parliamentary Reform Bill of 1831-33 readjusted the whole system of political representation of the English people. It was opposed because it seemed dangerous to change an ancient custom; it was urged because it implied a higher spiritual view of man. Is not this voice in the poem? It was radicalism and conservatism in a life and death struggle.

The Oxford Movement heralded by J. H. Newman in his "Tracts for the times" was one of the three greatest religious awakenings that ever occurred in England. It stands side by side with the great Protestant Reformation of the sixteenth century and the Wesleyan Evangelical movement of the eighteenth century. This movement presented two phases, one known as the Broad Church movement headed by Dr. Arnold of Rugby, the other moving toward closer forms of ecclesiasticism and headed by John Henry Newman, afterward Cardinal Newman of the



Catholic church. It was a counter reformation moving back from the absence of authority in individual judgment to authority as embodied in the institution of the church. Newman's poem, "Lead Kindly Light", grew out of this struggle and most admirably expresses both sides of the struggle. The whole movement resulted in Newman, with one hundred and fifty other prominent men, formally quitting the English Church and finding religious homes in Catholicism in 1845. Can one fail to hear this conflict in Tennyson's "Two Voices"?

Lyell in his "Elements of Geology" discovered that the earth had grown by well marked stages to its present condition, and had not come by instantaneous creation, as had long been supposed. This in no wise unsettles our religious faith at present, but in the thirties it did in a most shocking manner, for to many it seemed that the Genesis account had to be re-interpreted. It had already been destroyed and so it was freely asserted that science was undermining the very basis of faith, and there was established a conflict between science and religion which must ultimately destroy one or the other. This divided society into two factions, one standing by science and even condemning all matters of faith, the other standing by religion, and absolutely condemning all science as the work of Satan.

Of course we regret that they did not see that a conflict between science and religion is an utter impossibility, but that they did not is what concerns us now. That they did not is not surprising.

"The Two Voices" is precisely the quarrel between the science of the senses and the faith of the soul. Tennyson lived in a time and in a place of intellectual volcanoes, and it is not at all surprising that he was disturbed and even unsettled by them. From Tennyson's earliest writing in 1827, down to his "Crossing of the Bar" in 1892, he is distinctly the poet of "Two Voices." Tennyson was not fixed in his doctrine of life as Browning or Emerson or Lowell. He was a strange mixture of radical and conservative, of scientist and religionist, of faith and sight. The poem, "The Two Voices" is, in a sense, a key to his whole thought as expressed in his poems.

I am sure this view of "The Two Voices" is a bit peculiar and it is certainly fragmentary, yet I hope it is suggestive and may lead some one to a further study of Tennyson. Above all things, I trust that this view shall not be accepted as final.

**LEND A HAND.**

*(This department is conducted by Mrs. E. E. Oleott.)*

*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

**POOR JOHNNY.**

Johnny had been in my room a month before I discovered that in a certain line he had rare natural ability. I was teaching in a suburban district which had a floating tenement population. The sixty little pupils were, as a school, singularly unprepossessing. In seeking to rouse ambition, I found that reward of merit cards worked like a charm. Little tickets that said "perfect" seemed to them a tangible mark of approval. Ten perfects entitled the possessor to receive a picture in exchange. One day Johnny's slate work was especially good and I beamed upon him as I dropped a perfect in his open palm. Quicker than thought his hand dropped to his side.

"Open your hand, please, Johnny," I said quietly.

With hardly perceptible hesitance his fingers unclosed. "Why, you gave me *two* perfects!" he exclaimed in such a surprised tone that I was startled. He must have known there were two; he had concealed them instinctively, yet his look and tone were so innocent! There had been complaints that perfects were missing, and as for pencils and apples, they had seemed to dissolve in thin air, so mysteriously they disappeared.

I decided that Johnny needed special attention.

A few days later I discovered that counterfeit perfects were being given to me. The genuine ones had the word perfect on one side, the other was blank. The counterfeits were of the same size and color, but blank on both sides. It was easy to receive several counterfeits in each package of ten, unless I turned each one face up. For a week I carefully examined each ten that was handed in. I received one or more counterfeits from half a dozen different children. They strenuously denied all knowledge of them. The ten that Johnny gave me contained no counterfeits.

To have matches at school was strictly forbidden. Happening to see a match-box peeping from Johnny's pocket I required it of him and found it full of freshly-made counterfeit perfects. How he had slipped them into circulation I never knew, for con

ness any misdemeanor he never would. He maintained piteously and pleadingly, with tears in his eyes, that he did not know how the perfects came to be in his match-box. He volunteered the opinion that it was wicked to tell lies and that he never told a lie in his life.

I inquired into his family history and called to see his mother. She seemed to be a well-disposed, care-worn, heart-broken little woman, toiling day and night to provide the barest necessities for herself and two children, Esther and Johnny. Esther was also one of my pupils and I never knew a more honest child. The father was serving a long term in the penitentiary for burglary. He had been sentenced when Johnny was three years old.

My heart warmed toward the boy. I resolved to help him to be upright. I exhausted the whole catalogue of suggestions given by experienced friends and gleaned from works of pedagogy. I tried to win his affection and I have no reason to doubt that he really loved me. After six months of careful, prayerful instruction, a little tin horn which the happy owner had deposited with me for safe keeping, disappeared from the drawer of my desk. Circumstances pointed to Johnny. I questioned him as skillfully as I could, trying to make it easy for him to confess. He looked me in the face and said earnestly, "Miss B—if I knew anything about Ed's horn, indeed, I'd tell you. That's what I'd want him to do if it was *my* horn that was lost." Then I went to Johnny's desk and found the horn. A few days afterward, Johnny and Esther were absent. They had moved to the city.

When my term closed, I visited the city schools. In the room of a friend of mine I saw Johnny. His face glowed with pleasure when I spoke to him.

"What do you think of him?" I asked my friend, privately.

"I never dreamed a child could be so expert a thief," she replied. "He takes everything he can lay his hands on, and can reach anything in the room."

The next fall at Thanksgiving time, I improved another opportunity to inquire about my protegee. I learned that his mother was dead and he and Esther inmates of an orphans' home.

"Johnny is a remarkable boy," his new teacher averred. "I'm almost afraid of him, his thefts baffle me so. He took a handkerchief from my desk while talking to me, and I did not see him, and never could get the handkerchief, but I know he

must have taken it. Our principal Mr. D— has just made his acquaintance! Johnny borrowed Ben's knife and then denied it. Mr. D— investigated. His mental verdict was that Ben must be mistaken, and Johnny innocent. Johnny told his story in such a clear, straightforward way, and seemed so hurt at being suspected, that it seemed impossible to doubt him. But as a final precaution, Mr. D— said "John, I fear it is my duty to search you." "All right, sir," was the cheerful reply. "I want you to be sure that I have not the knife."

The knife was found inside his stocking at the ankle, well hidden by the top of his shoe!

At Christmas time I again sought information about my black sheep. He had been sent to a good home on a farm to live with a kind old couple whose children had gone to homes of their own. I was cheered and hoped for Johnny's future.

Three years later the matron of the orphans' home told me that he had proved incorrigible and had been sent to the reform school. Since then I have never heard of him. If he is living he has passed his twenty-third birthday. How I should like to know his history. He had a genius for theft and deception. He could not help stealing—it was his gift. But the solemn question remains: What is our *duty* toward such as he, and toward the classmates whom his influence contaminates?

Poor Johnny!

"His heart and mind were both born blind,  
No wonder he went astray."

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### DESK WORK.

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Washington's birthday is at hand, and its celebration often calls for paper stars as well as hatchets, flags, and colonial costumes. There is a way to fold a square of paper so that a single clip of the scissors will produce a five-pointed star. I have, in the past, noticed in three educational journals, directions for making such stars, so that many of the readers of "Lend a Hand" may know how to cut them. But since it is my experience that it is even easier to forget the fold than to learn it, and it is so convenient to know how when occasion calls for stars, that I venture to give the directions. I am indebted to the American Teacher for the illustrations of the folds; the directions I have elaborated and given more in detail.

1. Fold the lower edge of a square of paper to the upper edge, forming an oblong.

2. Divide the right hand edge into three equal parts, and mark the upper third with a pencil mark at *a* (Fig. 1.)



FIGURE 1.

3. Fold the lower left hand corner to the mark at *a* (Fig. 2) and notice the triangle *a b c*.

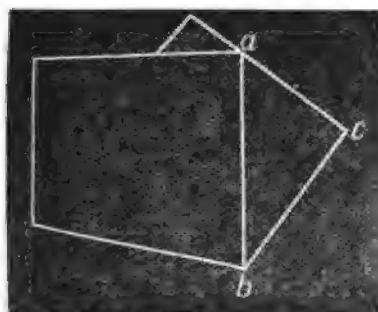


FIGURE 2.

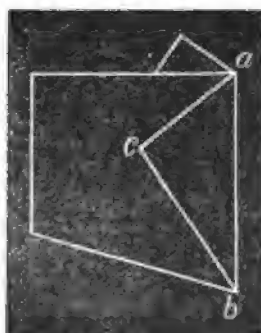


FIGURE 3.

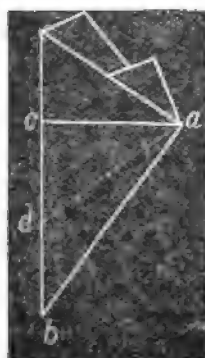


FIGURE 4.

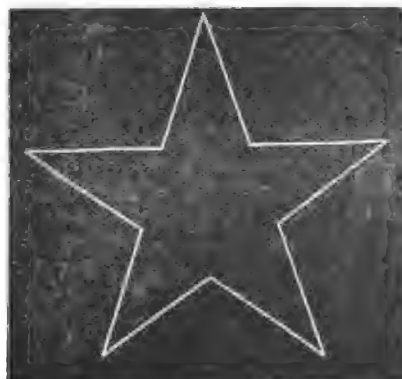


FIGURE 5.

4. Fold the triangle over the edge a b (Fig. 3).
5. Fold the paper along the line b c so as to exactly cover the triangle (Fig. 4).
6. Make a dot at a point, d, about three-eighths of the distance from b to c (c being the apex of the triangle concealed by the last fold) (Fig. 4).
7. Cut obliquely along the line a, d, and when unfolded, a five-pointed star (Fig. 5) will be the result.

### A REPRODUCTION STORY.

The pupils are supposed to be able to read the story, "The Little Boy's Dream." Since the thought is so easily grasped, the reading is virtually a matter of being able to pronounce the words. The questions, which are written below the selection, are merely a guide in the reproduction. They are purposely the very simplest. With the majority of raw recruits in this phase of language work, the simplest selection and questions about it are quite hard enough. If they must weigh words and ponder what phrases may mean, they become confused. By and by, they will be able and delighted to search for thought.

#### THE LITTLE BOY'S DREAM.

A little boy was dreaming  
 Upon his nurse's lap,  
 That the pins fell out of all the stars,  
 And the stars fell into his cap.  
 So when his dream was over,  
 What did that little boy do?  
 Why, he went and looked inside his cap  
 And found it was not true.  
 Where was the little boy?  
 What was he doing?  
 What did he dream?  
 Where did he look when he waked?

Here are copies of the story reproduced by pupils in the same class :

in his nurse lap  
 Dreaming.  
 the pins fell out  
 Inside his cap.  
 And found it was not true.

JOSIE.

## THE LITTLE BOY'S DREAM.

A little boy was in his nurse's lap.  
He was dreaming.  
He dreamed the stars fell into his cap  
Because the pins fell out.  
When he waked he looked in his cap.  
He found his dream was not true.

JESSIE.

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**PRIMARY DEPARTMENT.**

*Edited by Mrs. Sarah E. Turney-Campbell, Supervisor of Instruction in the  
Anderson Schools.*

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**PRIMARY ARITHMETIC**

Mr. Speer's little book (published by Ginn & Co., price 35 cents) on primary arithmetic is very suggestive. He assumes in the beginning that mathematics deals with definite relations of magnitude; that "perception of equality is the basis of mathematical reasoning," and that the act of comparison is the fundamental activity involved. The child must compare in order to see perfect equality or the exact degree of inequality. Mr. Speer also assumes that number is a relation, a ratio, and not something fixed. This ratio or relation is determined by using a definite quantity or magnitude as a standard and measuring another certain quantity to find how many units of the standard are found in this new number or quantity or magnitude.

Here are three lines, one 2 inches, one 4 inches and one 8 inches long :—

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

Now if A is 2, then B is 4 and C is 8; if A is 3, then B is 6 and C, 12; if C is 16, then B is 8, and A, 4; if B is 10, then C 20 and A, 5; if C is 1, then B is  $\frac{1}{2}$  and A is  $\frac{1}{4}$ . That is, the particular number element in this series is not fixed but it is the ratio that is fixed. This helps to distinguish the accidental from the essential relations in number.

Mr. Speer holds that the child can make this distinction by dealing with a great number of magnitudes and therefore to the extent that he can do this, he can appreciate true mathematics.

The first step in the process of reaching this true notion of mathematics is that of clear imaging. "Ideas of magnitude must be based on perceptions." "In every exercise the first thing to secure is a clear mental picture," and things must not be presented as isolated, independent, absolute in themselves. That several objects be presented is not all that is necessary that a relation may be seen, but a definite act of comparison must be made.

Not all objects are equally well fitted to awaken mathematical ideas. "Were we concerned simply with the number of things, beans, shoe-pegs, shells, leaves, pebbles, chairs, or the legs of frogs might serve as well as anything. But mere mechanical equality will not serve as a basis for mathematical reasoning: exact results cannot be founded upon it." "A superficial knowledge of mathematics may lead to the belief that this subject can be taught incidentally, and that exercises akin to counting the petals of a flower or the legs of a grasshopper are mathematical.

Such work ignores the fundamental idea out of which quantitative reasoning grows—the equality of magnitudes. Numerical statements are frequently required in the study of natural history, but to repeat these as a drill upon numbers will not result in mathematical knowledge."

"We see at once why plants and animals are not well adapted for our purpose. In them, that which is material is obscured by that which is irrelevant. Their differences in magnitude are not easily appreciated by the senses. Their exact measurement is not easy. What objects will excite definite ideas? Things whose exact relations can be most readily seen: things which can be most accurately imagined and exactly compared: things which tend most to excite definite intuitions and to result in definiteness of mind, should be given precedence in elementary instruction in mathematics. Definite magnitudes should furnish the objective stimulus in laying a basis for mathematical knowledge."

Mr. Speer thus distinctly favors the use of geometrical solids, and surfaces, and lines for developing true mathematical notions, and distinctly discourages the use of the variety of seeds, sticks, nuts, and nature work as natural for primary number work. The second step in the process is

#### ACCURATE COMPARISON.

When the picture is clearly formed in the mind then comes the comparison or measuring. The child's answers indicate the



definiteness of image formed and his ability to compare. He should stand the objects up by each other to determine which is longer or shorter, or thicker; he should determine by actual motion if necessary which is closer, which farther away. This act of comparing may include many relations beside that of the number relation or ratio. The objects may be solids, surfaces and lines. He also suggests the use of colored bits of ribbon, worsteds, thread, paper, etc., and have the colors compared just as the forms are.

The third and last step in the process is the act of

#### JUDGMENT

based on the comparison. At every point the child is to verify his own conclusions. If he says the surface on this side of a cube is equal to a certain other surface, he then may apply the one surface to the other to make sure.

#### MEANS TO BE USED.

In connection with the first step, the objects suggested are geometrical solids, surfaces and lines. Mr. Speer suggests a series of lessons on these forms in such a way as to familiarize the pupils with them by sight, by feeling, and by hearing where practicable. This work is to make the children accurate in picturing. The children compare the objects as they find them on the table; then they look for similar objects in the room; remember them at home. The teacher arranges two or three different solids in a certain order; the children are allowed one glance, then asked to name the solids in their order; the largest, smallest. This work is continued with other forms. Similar work is done with colors.

Mr. Speer makes quite prominent the idea that the full expression of the child involves all forms of thought expression. So he suggests that the steps of imagery, comparison, and judgment will all be more clearly and accurately done if various means of expression are used.

Then he suggests cutting from paper, a slip of a given length; a shorter one, a longer one; a square of a certain size, a larger and a smaller. Following the cutting, he suggests the drawing of the figure under consideration. The making of the *figures* to indicate the ratios are at the very end of the process, and according to his little book, one is led to think they are not used at all or some little time.

Many of the ideas presented by Mr. Speer are not entirely new, but the particular working out of his idea is new. He is very helpful for he not only gives his theory of the work in primary number, but he shows definitely how he thinks it may best be worked out. Out of 154 pages, he gives 117 to the concrete work with material, and every primary teacher especially appreciates this part of it.

### EXPRESSION.

The term *expression* as used by the average teacher means very little. It usually means no more than expression by means of words, spoken and written. Expression to an elocutionist means more than this; all the facial and bodily changes and variations that hint the thought of the doer. And with the painter, sculptor and musician, expression has still a different meaning.

Now a primary teacher ought to understand that expression of the real self of the child may be in one of almost countless ways, and she should be able to interpret him from this manifold expression. All his moods and words and actions should be indicative of the real child. While the teacher should try to interpret the child through what he does, she should just as constantly see if she can not give a conscious trend to more modes of expression than simply that by means of words.

The child actually delights in building or creating things with his hands, and in this connection comes the work with the putty, clay, sand, wood or blocks. The expression by means of the scissors is another mode in which children take delight. Scenes from the life of Hiawatha—the tent, boat, pine trees, bow and arrows—are quickly and quite well cut out of sheets of paper by little children.

Then comes drawing, a mode of representation that is one step farther removed from the object itself. As this means of representation is quite largely recognized, I shall say nothing of it here.

When looking at the value of different forms of expression for little children, it is frequently viewed as an end in itself. That is, we think it is well for the child to be able to speak and write accurately and fluently, because it is an equipment that is very useful in the practical affairs of life. But it is also a fact that

clear expression leads to clear thinking. The very act of expressing helps the mind to be more clear or accurate in further work. The fuller and better the child expresses himself the fuller and better he will be able to think.

Oral expression is of a kind that must be very much restricted in our common schools where there are forty or fifty children. But there are so many other ways that may be employed, ways in which the hands play an important part, that it is worth while for every primary teacher to think over sand and clay and blocks and scissors and paper and needles and thread, and see if such things would not be very helpful in leading to clearer, more accurate thought by re-inforcing in these different *ways of expression*.

Various kinds of "hand expression" are valuable aids in work with leaves, flowers, stem and roots. They may be molded out of clay, the shapes cut out of paper, and they may be drawn and colored with pencils or water colors.

Stories read to the children are excellent for illustration. They enjoy expressing their ideas about why the poplar holds his branches up, the little brown thrush, or Hiawatha's home on the shore of the lake.

"Hand work" helps very much in busy work regarding certain days, such as St. Valentine's day, the birthdays of Washington and Lincoln, Christmas, etc. And the busy work period is too frequently a period of wasted time or a time in which the children form habits of indolence, restlessness and inattention. Work of this kind with the hands in building, cutting and drawing helps to form habits of industry and attention; reinforces the work of the school, and leads to clearer thinking by giving the children several forms of self-expression.

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### ALL WRONG.

One of the boys brought home his arithmetic lesson, and his mother, after watching his struggles for a time in silence, offered help him.

"Oh, no," said he, with a look of scorn, "you can't do it to help you." As the mother was a college graduate she naturally somewhat nettled at this, and insisted upon her ability to solve the problem. She did so to her own satisfaction, but not to the boy's. He declared that she did not do it right, though he would not tell what was wrong.

"We'll leave it to papa," said she finally. The father, too, was a college graduate and had taken high honors in mathematics. The father said that the mother's method was the right one, and indeed the only one. Unconvinced the boy went off to school the next morning. At noon he came home triumphant.

"There, I told you so!" he shouted as he entered the house. "You did it wrong."

"What was the matter?" both parents asked.

"Well, you left out two *sinces* and a *hence*," was the convincing reply.—*Selected.*

## **LINCOLN'S BIRTHDAY, FEBRUARY 12.**

[We give the following selections to be used as opening exercises on the morning of February 12. The kindness of heart displayed in each is certainly a good subject for the thought of the morning hour.]

### **FOR THE BLACKBOARD :—**

"Gold is good in its place ; but living, brave and patriotic men are better than gold"—*Lincoln.*

"All that I am, all that I hope to be, I owe to my angel mother."—*Lincoln.*

"Lincoln is the greatest American, who feared God only, and saved the honor of his country."—*Theodore Thomas.*

### **PRESIDENT LINCOLN IN THE HOSPITAL.**

In a recent conversation with a Union soldier, a correspondent heard a fresh story about the late President Lincoln. As near as possible our friend tells it in the soldier's words :

"I had been in the Finley Hospital several months," said the soldier. "One day in May, 1863, President Lincoln and Secretary Chase walked into the ward where I was lying. You don't know how much good it did us to see them ; one gets so tired looking at the nurse and at all the long row of cots. It is hard to lie on a cot day after day, and hear the boys moan, as their life ebbs away.

"Some morning you wake up and see an empty cot near you. 'No. 6 is gone?' you say to the nurse.

"Yes, he went at three this morning ; poor fellow ! but it's better for him, she answers, in a sympathizing voice.

"We boys, therefore, took solid comfort in looking at Lincoln's face that afternoon, and hearing him talk. He didn't say much to me that day, but it was good to hear him say anything, his words were so gentle and so kind. And then he was as thoughtful as a mother ; he knew just what to say.

"I had been very sick. Yes, that sleeve's empty. I left the arm at Chattanooga. As I was saying, he only spoke a few words to me, and passed on to No. 26.

"A Vermont boy, a mere lad, not over sixteen, was on it. He had been wounded mortally and was near his end. Mr. Lincoln stopped at his cot and taking the thin, white hand said, in a tone that was as tender as a mother's :

"My poor boy, what can I do for you?"

"With a beseeching look, the little fellow turned his eyes up at the homely, kindly face, and asked. 'Won't you write to my mother for me?'

"That I will," answered the President, and calling for pen, ink and paper, he seated himself by the side of the cot. It was a long letter that he wrote, at least three pages of commercial note, and when it was finished the President rose, saying :

"I will mail this as soon as I get back to my office. Now, is there anything else I can do for you?"

"In some way the boy had come to know that it was the President. And so, looking at him in an appealing sort of way, he asked :

"Won't you stay with me till it's all over? It won't be long, and I do want to hold on to your hand!"

"That was too much for the great-hearted President to resist. The tears came to his eyes and he sat down by him and took hold of his hand. The little fellow did not move or speak a word. This was some time before four o'clock, and it was long after six that the end came. But the President sat there as if he had been the boy's father. When the end came, he bent over and folded the thin hands over the breast, and then looked so sorrowfully at the pale, thin face. The tears streamed down his cheeks unheeded. We all cried, too.

"Do you wonder that the boys in blue loved Abe Lincoln?"

#### LINCOLN'S TENDERNESS OF HEART.

Here is an incident related by Mr. Speed :

"Lincoln had the tenderest heart for any one in distress, whether man, beast, or bird. Many of the gentle and touching sympathies of his nature, which flowered so frequently and beautifully in the humble citizen at home, fruited in the sunlight of the world when he had place and power. He carried from his home on the prairies to Washington the same gentleness of disposition and kindness of heart. Six gentlemen, Hemgone, Lincoln, Baker, Hardin and two other whose names I do not now recall, were riding along a country road. We were strung along the road two and two together. We were passing through a thicket of wild plum and apple trees. A violent wind storm had just occurred. Lincoln and Hardin rode behind. There were two young birds by the roadside too young to fly. They had been blown from the nest by the storm. The old bird was fluttering about and wailing as a mother ever does for her babes. Lincoln stopped, hitched his horse, caught the birds, hunted the nest and placed them in it. The rest of us rode on to a creek and while our horses were drinking, Hardin rode up. 'Where is Lincoln' we asked. 'Oh, when I saw him last he had two little birds in his hand hunting for their nest.' In an hour perhaps he came. They laughed at him. He said with much emphasis : 'Gentlemen you may laugh, but I could not have slept well to-night if I had not saved those birds. Their cries would have rung in my ears.'"

## PROGRAM FOR WASHINGTON'S BIRTHDAY.

*The value of Washington to his country transcends that of any other man to any land.—Curtis.*

[DECORATIONS :—Bring to the school-room all the flags you can get—tiny ones, large ones, middle-sized ones—there will be a place for each. The teacher with artistic taste will have grand opportunity to display all her latent powers. Be sure and have the picture of Washington and give it a prominent place. The black-boards will afford a place for copies of his Mt. Vernon home, the White House at Washington, the Washington monument or any other appropriate sketch. With the aid of some of the pupils who will delight in the task, cut out fifty or more pasteboard hatchets and having purchased a roll of very narrow ribbon, deck each child as he enters with this emblem so inseparably connected with the memory of George Washington, the boy.]

### 1. SONG ..... America.

My country 'tis of thee,  
Sweet land of liberty,  
Of thee, I sing ;  
Land where my fathers died !  
Land of the pilgrim's pride !  
From every mountain side  
Let freedom ring !

Our Father's God, to thee  
Author of liberty,  
To thee, we sing ;  
Long may our land be bright  
With Freedom's holy light ;  
Protect us with thy might,  
Great God, our King !

### 2. RECITATION ..... February Twenty-Second.

In seventeen hundred thirty-two,  
This very month and day,  
Winking and blinking at the light,  
A little baby lay.

As general, he never failed  
Or faltered : so they thought  
He ought to be the president,  
And so I'm sure he ought.

No doubt they thought the little man  
A goodly child enough ;  
But time has proved that he was made  
Of most uncommon stuff.

And then he did his part so well.  
As president—t'was plain  
They couldn't do a better thing  
Than choose him yet again.

The little babe became a man  
That everybody knew  
Would finish well what he began,  
And prove both firm and true.

Through all his life they loved him well  
And mourned him when he died ;  
And, ever since, his noble name  
Has been our nation's pride.

So when the Revolution came,  
That made our nation free,  
They couldn't find a better man  
For general, you see.

The lesson of his life is clear,  
And easy, quite, to guess,  
Be firm and true, if you would make  
Your life a grand success.

—Foy Allison.

## 3. RECITATION.....Our Nation's Heroes.

"Whole nations and ages shall honor the clime,  
Where Washington, Lincoln and Grant rise sublime.  
The stars in their courses forever shall chant,  
The names of our Washington, Lincoln and Grant.  
Their names from the muster of earth must be lost!  
But while Freedom's stars in her firmament blaze,  
One bright constellation shall draw the world's gaze."

## 4. RECITATION.....Like Washington.

I've been thinking to-day about Wash- ington, America's best beloved son, Honest and truthful, bold and brave, He taught old England how to be- have!	I would like to flourish a sword and say, "We will fight and drive our foes away." But I tell you what, I would hardly dare
I would like to be great like Washing- ton, And go out to war and carry a gun. I think it would be a splendid thing To free a land from a cruel king!	To cross as he did, the Delaware! My mother tells me that everyone Cannot become a Washington. But even a little boy can be As great a hero for truth as he!

So I have determined that I will try  
To be good and noble and tell no lie,  
And then, tho' no daring deed I've done,  
I'll be a little like Washington!

—Susie M. *Best in Teachers' World.*

## 5. ESSAY.....Washington as a Country Boy.

## 6. READING.....A Letter from Washington.

(*By a little girl.*)

We usually think of Washington as a serious, grave, rather stern man, but he appeared so because he had so much serious and stern work to do. As a boy, he was much like other boys, full of life and fond of play. One of his playmates was Richard Henry Lee, afterwards famous in our history. When Washington was about nine years old, he wrote this letter to Lee:

"DEAR DICKEY—I thank you very much for the pretty picture-book you gave me. Sam asked me to show him the pictures, and I showed him all the pictures in it; and I read to him how the tame elephant took care of the master's little boy, and put him on his back, and would not let any body touch his master's little son. I can read three or four pages sometimes without missing a word. Ma says I may go to see you and stay all day with you next week if it be not rainy. She says I may ride my pony, Hero, if uncle Ben will go with me and lead Hero. I have a little piece of poetry about the picture-book you gave me, but I mustn't tell who wrote the poetry:

"G. W.'s compliments to R. H. L.,  
And likes his book full well ;  
Henceforth will count him his friend,  
And hopes many happy days he may spend.

"Your good friend,                      GEORGE WASHINGTON.

"I am going to get a whip-top soon, and you may see it and whip it."

7. SONG.....Columbia, the Gem of the Ocean.

8. RECITATION.....The Good Old Times.

"When Washington was president He saw full many an icicle ; But never on a railroad went, And never rode a bicycle.	His trousers ended at the knees ; By wire he could not send dispatch ; He filled his lamp with whale oil grease And never had a match to scratch.
He read by no electric lamp, Nor heard about the Yellowstone ; He never licked a postage stamp, And never saw a telephone.	But in these days it's come to pass, All work is with such dashing done— We've all those things ; but then, alas ! We seem to have no Washington."

—Burdette.

9. RECITATION.....Suppose.

Suppose he had told stories ;  
Suppose he'd had no pluck ;  
Suppose he had been idle  
And trusted things to luck ;  
Suppose he had not carried  
That message through the snow ;  
Suppose when war guns called him  
He had refused to go ;  
Suppose he had been cruel  
And cowardly and base ;  
Would every year be willing  
To give his day a place ?  
But Washington resisted  
The evil round his way.  
That's why his name his honored,  
His day a holiday.

10. READING.....Washington Signing the Constitution.

Washington was the first to sign. It was long popularly believed that, as he stood beside the table with his hand upon the constitution, he held up the pen and said : "Should the states reject this excellent constitution, the probability is that opportunity will never again offer to cancel another in peace ; the next will be drawn in blood." When he had signed, the other members went up, one by one, in the geographical order of the states, beginning at the east. As the last members were affixing their names, Franklin, looking toward the president's chair, back of which a rising sun happened to be painted, said to a few who sat near him, that painters had found it



difficult in their art to distinguish a rising from a setting sun. "I have," said he, "often and often, in the course of the session, and the vicissitudes of my hopes and fears as to its issue, looked at that behind the president, without being able to tell whether it was rising or setting. But now at length I have the happiness to know that it is a rising and not a setting sun."—*McMaster's History of the People of the United States.*

RECITATION BY PUPILS :

(*Each standing at his seat without being called out.*)

11. To the thoughtful patriot, Washington Day is the most sacred of our national anniversaries. It was Washington's undismayed and patient leadership which maintained the independence the Colonial Congress declared ; it was his broad statesmanship that shaped the constitution ; it was his superb spirit that entered into our traditions and has swayed our policy as a people.

12. Other American generals were as brilliant in battle ; but Washington alone could conquer defeat. His strongest foes were not the invader ; but hunger, nakedness and desertion within his own army ; long periods of inaction more trying than battle ; the bitter jealousy of his fellow generals ; the weakness of Congress ; and the forgetfulness of the people. But when most abandoned in that long war, he stood calm and unmoved, like a massive boulder—a sign of hope for all who prayed for freedom.

13. Other statesman were as learned ; but when came the hour to form the constitution, it was Washington's prophetic wisdom that pleaded for foundations deep enough and broad enough to fit not only the present needs but the lasting future of the new Republic. It was he, in that historic convention which made our government, who showed how conflicting principles could be welded together in perfect harmony. It was he who made the strongest call for union ; others planned for their own states ; but Washington rose above sections, and was the architect of a nation, one and indivisible.

14. Other men of the Revolution were as patriotic and incorruptible. But Washington's patriotism was enlightened by a riper judgment ; and his integrity had stood the glare of noonday before the world. He was felt to be the Lord's anointed, called of heaven to stamp his personality upon the nation whose liberty he had won. He led a willing people while he lived ; no less willing are Americans to-day to be guided by his unmatched example and words of safety.

15. Thus Washington was vastly more than the most distinguished leader of the Revolution. He seemed to gather in himself all the best traits that had grown up in the colonies before him. He embodied the spirit of all America. Others were New Englanders, or Southerners ; he wore the marks of no section. Like no other man of his day, he was an *American*—the first American. And it is the conspicuous personal qualities which he impressed upon his country—courage, justice, love of liberty and enlightenment—that our nation has embodied in its life, and that we call the true Americanism to-day.

16. It is fitting that the public schools of America unite year by year to do honor to this First American.—*Francis Bellamy.*

*A child dressed in red and carrying red flowers steps to the front and recites:*

17. RED:

" I love the Red, the gleaming red  
Of the stripes so bright and clear.  
Brave men grow braver in war, 'tis said,  
When the crimson folds float near.  
And my heart grows light  
Whenever I see  
The stripes of our banner  
Waving for me."

18. WHITE, *appropriately dressed, takes place at left of Red:*

" The flag at first was pure and white  
With never a field of blue,  
Nor a crimson stripe, nor a silver star  
Its snow white surface knew.  
I'm sure my heart  
Loves the pure white best  
For its snowy banner  
Holds all the rest."

19. BLUE, *at left of White:*

" The stars of the States shine bright and clear  
In their deep, deep field of blue,  
And each one says, ' I have joined the flag,  
To its colors I'll be true.'  
Give me the field  
Where the stars are set :  
There are forty-five  
And more room yet."

COLORS, *joining hands:*

" So we join our hands for the flag we love—  
Stripes, stars and field in one—  
Red, White and Blue, and hail anew  
The flag of our Washington.  
Yes, hand in hand,  
With hearts as one,  
We'll be true to the flag  
Of Washington."

20. CONCERT EXERCISE..... With Salute to the Flag.

" Flag of many a battle's heat !  
Tho' thy folds have waved defeat,  
When the feet around thee beat  
O'er the fields in dim retreat ;  
Still thy stars undimmed we see  
Leading on to victory ;  
Still thou floatest proud and free  
Emblem of our unity."

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**OFFICIAL DEPARTMENT.**

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**CLOSING SCHOOLS WITHOUT CONSENT OF TEACHERS.**

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DEAR SIR: Your favor of the 4th inst. is before me. In it I find the following: "Some of the trustees of this county ordered the schools closed for three days during the county fair. This was directly opposite to the wishes of the teachers and patrons. The trustees now say we (the teachers) must make the time up in the spring. Do we have to lose the time or make it up when we were opposed to closing school?"

Replying to your question, will say that the school interests in a community should take precedence over all other interests after the schools open in the fall. They should not be closed for anything, except sickness and legal holidays (Thanksgiving, Christmas, etc.), and the vacation from Christmas until the New Year, the observance of which has become so universal. If the teachers and patrons were opposed to closing the schools three days during the county fair, the trustees could not compel the teachers to make up the time in the spring; neither could they refuse to pay them for the three days during which the schools were closed. The Supreme Court of Indiana (74 Ind. 127) holds "that in a contract, such as the one before us, the teacher is entitled to recover compensation for every day covered by the term provided for in the contract, and is not confined to the days in which she actually taught the school, if the failure to conduct the school each day of the term was caused by the wrongful act or omission of the authorities." In the case you cite it was certainly wrong for the trustees to dismiss the schools for three days, hence the decision as above, that your trustees can not compel the teachers to make up three days' time at the close of the school term in the spring. Yours very truly,

D. M. GEETING.

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THE STATE BOARD OF EDUCATION at its meeting, October 1, 1896, made the following order:

That hereafter no high-school commission be granted except on a favorable report in writing, to be made to the State Board of Education, by some member of the State Board, who shall visit the high school in question, as a committee of the Board.

That in case of change of superintendent in any commissioned high school, the commission then existing shall be in force until a visitation shall be made by some member of the State Board.

For such visitation and inspection the State has been apportioned among the members.

For full information and circular, write to Superintendent Geeting.

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ANY ONE who will send to State Superintendent Geeting sixteen cents, with which to pay postage, will receive the Report of the Department, just issued.

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**EDITORIAL.**

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'T is splendid to live so grandly  
That long after you are gone  
The things you did are remembered  
And recounted under the sun ;  
To live so bravely and purely  
That a nation stops on its way,  
And once a year, with banner and drum,  
Keeps its thought of your natal day.

—Margaret Sangster.

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**PROPOSED NEW SCHOOL LAW.**

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Under the supervision of State Superintendent Geeting, a school law has been prepared and has been presented to the legislature. This law provides :

1. That a law be enacted making it the duty of township trustees and the trustees of town and city schools, to furnish high school accommodations, free, to all graduates from the common school branches.

2. That a law be enacted making it the duty of the State Board of Education to examine all teachers for license to teach in the public schools of the State, thereby making the license valid in any part of the State instead of one county as at present.

3. That there be a law enacted providing for the qualification of county and city superintendents.

4. That an enabling act be passed enlarging the work of the State Library board whereby a district library system may be established, extending the privilege of reading good books to children in our county, village and town schools.

5. That the State Board of Education be authorized to recognize State certificates issued in other states.

6. It also provides for at least six months school in every school district in the State.

7. It makes the office of county superintendent a salaried office.

State Superintendent Geeting has made the following explanation of the bill, relating to examinations of teachers :

" Under the proposed law, the examinations will be conducted as at present, by the county superintendent. The manuscripts will be numbered and sent to the State Board of Education for gradation, the names of the applicants not appearing on the papers at all. The reports of the examinations will be sent by the State Board of Education to the county superintendent by numbers, and after the receipt of same, the superintendent will fill in the names of the applicants corresponding to the numbers. By such a plan it will not be possible for any person or school to be shown favoritism.

" Under such a law, the county superintendent will be, in reality, a supervisory officer, and not an office clerk as at present. He will have both the opportunity and pleasure of studying the needs of the schools from a professional standpoint.

"No teacher of experience will be licensed without the item 'School-Room Success,' which must in all cases be given by the superintendent, as above mentioned. The teacher will be greatly favored in that he will receive a license good anywhere in the State. The superintendents should not be tied down by the examination of manuscripts, which can be done at much less expense and at the same time with more uniformity by the State. They have higher and more important duties to perform, and should be given the opportunity.

"There are many good features in this change. The school-room success makes up one-half of the teacher's grade, while at present it only forms a small element in determining his license. This will be an incentive to good work on the part of the teacher. He will also know that his license largely depends on his actual work, and not on his answers to a few technical questions on examination day. In short, the bill provides that half his grade be determined by school-room work and one-half by examination.

#### HENRY BARNARD.

Henry Barnard celebrated his eighty-sixth anniversary January 26, at Hartford, Conn., where he was born, and where he now lives. He has been an active worker in education for more than sixty years, and is frequently referred to as the father of American education. He was contemporaneous with Horace Mann, and stands next to Mr. Mann as an apostle of education in this country. He spent a fortune of \$50,000 in publishing educational pamphlets and books, and is now a poor man. He is now actively at work revising some of his works for republication.

From 1830 to 1842, Dr. Barnard was secretary of the board of school commissioners in Connecticut; from 1842 to 1849, school commissioner for Rhode Island; from 1850 to 1854, superintendent of the Connecticut State schools; and from 1857 to 1859, president of the University of Wisconsin. But the greatest claim of Dr. Barnard to fame is that he brought about the organization of the Department of Education. Before 1867, the United States Government had no concern with the education of the people. Dr. Barnard had some years before begun the agitation for a National Bureau of Education, and in 1867, James A. Garfield, then a member of Congress, introduced a bill which he succeeded in passing largely through the efforts of Dr. Barnard. President Johnson appointed Dr. Barnard commissioner of education under the provisions of the new law.

Dr. Barnard began writing on educational topics as early as the year 1855, when he began the publication of the *American Journal of Education*. He also published a number of works on educational subjects, and in 1886 issued a collected edition of his works under the name of "The American Library of Schools and Education," in fifty-two volumes. These volumes contained 800 separate original treatises, each one of which is published separately. Dr. Barnard has seen and known personally all the presidents of the United States except Washington, John Adams and Jefferson.

The Connecticut State Board of Education made the anniversary of Dr. Barnard's birthday the occasion for showing him special honor. They gave

a banquet and had present Dr. W. T. Harris, the present commissioner of education, Gen. Eaton, ex-United States Commissioner, Pres. Dwight of Yale, Pres. Elliot of Harvard, Bishop Keane of Washington, and many other prominent men. Speeches were made by the Governor, the Mayor, and many of the distinguished visitors.

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#### COMPULSORY EDUCATION.

Several bills have been introduced in the Legislature in favor of compulsory education. Never in the history of the State has there been such a sentiment in favor of such a law, and this sentiment is neither partisan nor sectional. The State Association resolved in favor of it without a dissenting vote, the city superintendents in their State meeting were just as unanimous, and the State meeting of Township Trustees, five hundred strong, also voted in favor of it.

Most of the States now have a compulsory law. Experience has shown that such a law is of little avail unless it provides for a truant officer. Most of the laws provide that children between certain ages shall attend school a specified number of weeks in each year. The better thought now is that they be required to attend the full school year, so that they can keep regularly in their classes and grades, and thus receive greater benefit. The highest interest of society demands that such a law be enacted. Governor Matthews, in his message to the Legislature, makes a strong plea for a compulsory law, but in his argument makes a very grave and yet very common blunder. He finds the number of children out of school and growing up in ignorance by subtracting the number of children enrolled in the schools from the entire enumeration. He fails to take into consideration the fact that there are thousands of children under twenty-one years of age, not in schools, who have a good education. Hundreds of them are high school graduates and some of them teachers. There are ample reasons for the law without using fallacious arguments.

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#### STATE LIBRARY BILL.

A library bill has been introduced in the senate that provides for a system of libraries which will begin with the State library and end with the district library. The entire system is to be placed in the hands of the State Board of Education. The bill provides for a library in every school district in the State and contemplates making the State library of more value to the general public than it has heretofore been.

In the educational line, Indiana needs nothing else so much as it needs a good library system. The bill should become a law without fail.

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#### MEETING OF TOWNSHIP TRUSTEES.

The township trustees held their annual meeting in Indianapolis, January 14-15, with an attendance that reached over 500. They discussed many phases of their work and gave special attention to their school duties. They resolved in favor of compulsory education, of advancing the standard of

qualification of teachers and of superintendents, of taking the sale of school books out of the hands of the trustees and placing it in the hands of the county superintendent, of restoring the State school tax to 16 cents on the \$100 as it was before 1893.

The officers for next year are : President, W. F. Byrket, Knightstown ; Secretary, B. F. Johnson, Fowler ; Treasurer, W. E. Males, Evansville.

THE NATIONAL SUPERINTENDENTS' ASSOCIATION will meet in Indianapolis February 16, 17 and 18. It will be an important meeting, and every Indiana superintendent, city and county, should attend. Indiana's attendance at these national meetings is not quite creditable, being very far below most of its neighboring States. Now that the meeting is to be held in our midst, state pride, if nothing else, should prompt a large attendance. The following are some of the topics to be discussed : "Primary Course of Study," "State Superintendence," "County Superintendence," "Child-Study," "Art in Education," "Province of the Supervisor," "Supervision as Viewed by the Supervised," "Music in Education," "Relation of Teachers to Citizens." Several Round-Table meetings will be held Thursday afternoon, and an address will be given on each of the three evenings. It is not necessary to add that the topics will be discussed by the leading superintendents of the country. Charles B. Gilbert, of Newark, N. J., is president.

THE Report of the Superintendent of Public Instruction for 1896 is now out, and makes a good showing. It omits the statistical tables that usually occupy so much space in these reports, and gives the space to the discussion of matters of general interest to the educational public. Whether it pays to publish the examination questions is a question worth considering. It shows the school enumeration to be 734,640, and the enrollment 543,665, with an average attendance of 401,702. It shows the number of female teachers to be 7,754, and males 7,130 ; total, 14,884. It shows only four commissioned township graded high schools. Superintendent Geeting's recommendations to the Legislature in regard to new school legislation deserve careful consideration. The report as a whole is a good one, and will meet with general approbation.

THE minutes of the State Teachers' Association take large space in this issue of the JOURNAL and so some of the regular departments of the JOURNAL are either cut short or entirely omitted. The reports of the papers read at the Association are sufficiently full, in most cases, to give a good idea of what was said. The secretary has certainly done her work well. Any teacher who will read these minutes carefully through will get a good idea of what was done at the Association. The editor regrets that the reports from the section meetings were not sent in.

SPECIAL attention is called to Prof. W. E. Henry's article on "The Two Voices." It will be of immediate interest to those doing the township institute work.

INTER-COLLEGIATE FOOT-BALL has been abolished at Wabash College by a vote of the students themselves. This is a sensible step that other colleges should also take. The game as now conducted is conducive to neither health nor scholarship, and therefore has no place in a college or anywhere else. Inter-collegiate games of all kinds are of doubtful utility. Their tendency is to develop expert or professional athletes, something outside the legitimate work of a college. Innocent sports and games should be encouraged to the fullest extent.

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THE ADDRESSES AND PROCEEDINGS OF THE NATIONAL EDUCATIONAL ASSOCIATION, containing about 1,100 pages, is at hand. The addresses and discussions of the association, with its fifteen departments, make a pedagogical volume that should be in every well equipped teacher's library. The subjects discussed are of great variety and invariably the questions of the hour, and they are handled by the best educational thinkers of the country. For information in regard to it address Irwin Shepard, Winona, Minn.

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REPORT OF THE COMMISSIONER OF EDUCATION FOR 1894-5.—The second volume of this report, containing nearly 1,200 pages, is before us, and in the estimation of the writer is the most valuable volume ever issued from the department. It contains able discussions and carefully collected statistics on many of the vital questions now being discussed by the teachers of this country. Dr. Harris has a genius for getting at the core of things. He is the right man in the right place, and should be kept there.

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ON January 12, 1897, Miss Grace Espy Patton was inaugurated as State Superintendent of Public Instruction of Colorado, Mrs. Mary Holland Kincaid, a journalist and writer and a close student of educational affairs, as Deputy Superintendent, and Miss Hattie E. Stevenson, a practical teacher of successful experience, who has recently been devoting her attention to the study of library methods, has been selected by Miss Patton as State Librarian.

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WE CALL attention to the supplementary reading lessons found among the advertising pages. We have received several letters of approval of this new feature in the JOURNAL, and will continue them as long as teachers find them of value. See suggestions in last month's JOURNAL, as to the use of them.

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JOHN CLARK RIDPATH, Indiana's celebrated historian, has accepted the editorship of the *Arena*, and will soon remove to Boston to assume his new duties. Dr. Ridpath has achieved an enviable reputation as a historian and Indiana has reason to be proud of him.

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DID YOU FORGET to pay for your JOURNAL at the time agreed upon—on or before January 1st. If so, please attend to it at once and save the trouble and expense of sending you a "*reminder*."



## QUESTIONS AND ANSWERS.

### STATE BOARD QUESTIONS USED IN DECEMBER.

**WRITING AND SPELLING.**—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The handwriting of each applicant will be considered in itself, rather than with reference to the standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

**GEOGRAPHY.**—1. What effect, if any, does the Sahara have upon the climate of Southern Europe?

2. Why is Marseilles an important city?

3. What can you tell about the Manchester Ship-Canal? What will be its effect upon Liverpool?

4. Place in order of latitude, beginning with the lowest, the following cities: Mexico, Portland (Oregon), Montreal, Philadelphia, San Francisco.

5. Why is the region between the Rocky Mountains and the Sierra Nevadas barren?

6. How does the grain that is raised in the Northwestern States reach Europe? State routes. *(Select five.)*

**PHYSIOLOGY.**—1. Distinguish between Anatomy, Physiology, and Hygiene.

2. Name two uses of bones.

3. How does a tendon differ from a muscle?

4. What is the cuticle? Name two of its modifications.

5. What changes do food substances have to undergo before they are ready to nourish the body?

6. From what sources do men and animals derive their food supply?

7. What are some of the ill effects of too little exercise?

8. What are the functions of the blood in respect to nutrition and waste? Explain in full.

9. State specific instances in which you would use the organs of animals to illustrate physiological instruction. Tell what animals you would use. Give your reasons for such a method. *(Any six.)*

**ARITHMETIC.**—1. Show clearly why it is better to use three objects of one kind, in teaching three, than to use three different kinds.

2. Show how the principle of apperception can be used in the teaching of numbers.

3. Discuss the number six under the following heads: Preparation, presentation, application.

4. What is the net tax in a town whose taxable property is assessed at \$430,000, at 12 mills per dollar, 5 per cent. being paid for collecting?

5. How many feet, board measure, each board 18 inches wide, can be cut from a square log 16 feet long, 18 inches wide and 9 inches thick, allowing  $\frac{1}{8}$  inch for each cut of the saw?

6. A physician bought 2 pounds 9 ounces of quinine at \$38 per pound, avoirdupois, and sold it in ten grain doses at 20 cents per dose; did he gain or lose, and how much?

7. Show how a clear understanding of the fundamental principles in arithmetic is necessary to the mastery of ratio; of proportion.

$$8. \sqrt{25 \times 50 \times 50} + 25^2 \times 50^2 \times 50^2 = ?$$

READING.—1. Show how a knowledge of the words *kite fear, went, bread* and *make* will help the members of a second reader class to learn, without help from the teacher, the words *write, lear, bent, spread, and awake*. 10.

2. "The great end in reading is to give the child readiness in getting the thought out of printed and written language. If the thought is fully comprehended, the oral expression of it is comparatively easy." Discuss the above quotation fully. 10.

3. Select some lesson well known to you and state the extent of *preparation* necessary to a class studying the lesson the first time. 10.

4. Discuss the *presentation* of same lesson. 10.

5. Discuss the *application* of same lesson. 10.

6. Read a selection to the County Superintendent. 50.

GRAMMAR.—1. How does the clause differ from the phrase? Illustrate.

2. State the use of each word in the following: "Green leaves were here; but t'was the foliage of the rocks, the birch, the yew, the holly, and the bright green thorn; with hanging islands of resplendent furze."

3. Illustrate in sentences four uses of adverbs.

4. Illustrate difference between the formation of the possessive case singular and the possessive case plural. Explain.

5. Use the expressions "little" and "a little," and explain the distinction.

6. State some ways and means of correcting the written language of pupils.

LITERARY REVIEW.—1. What was the distinguishing feature of ancient civilization as to its "unity of character?" Explain.

2. Describe the theocratic form of government, and state what has been its relation to intellectual and political advancement.

3. State and describe briefly the ruling idea which controlled Greek civilization; Egyptian civilization. Compare and contrast the effect of the rule of a single idea in these two countries.

4. Compare and contrast ancient civilization with that of modern Europe.

5. "Modern civilization is the product of what has gone before." Explain this quotation and give some illustrations of its meaning.

6. How does Guizot account for the temporary progress of ancient civilizations, and for the permanent progress of modern European civilizations?

7. Describe in general the nature of the Roman Empire, and state in what important particular its government differed from that of the United States? (Any five.)

SCIENCE OF EDUCATION.—1. When Herbart speaks of the subjects of study in the schools as fitted to give the pupils a "moral revelation of the world," what does he mean?

2. Using any one of the common school branches as an illustration, show that, studied properly, it will to some extent reveal the moral world to the pupil.

3. If the pupil is led to see and realize that the world has a moral constitution, what effect on his behavior might this be expected to have?

4. Herbart declares moral worthiness to be the supreme aim of education. Do you accept this view? Give reasons for your answer.

5. What are the elements of sound moral character?

6. Besides leading the pupil to pursue a course of study regularly and systematically, what may the school do to educate the moral nature of the child?  
(Any five.)

HISTORY.—1. What is meant by the term free coinage?

2. Generally speaking, what provisions of the U. S. Constitution were suggested by the State Constitutions and what provisions were invented?

3. Give an estimate of the character of Henry Clay. What is the source of your estimation?

4. What did the Ashburton treaty determine?

SCIENTIFIC TEMPERANCE.—1. What are some of the things with which wines, beers and other liquors are adulterated? What is meant by absolute alcohol? What is meant by 80% and 70% alcohol?

2. Is water a food? Why?

3. What is the function of a true drink?

4. Why does the excessive use of alcohol cause the heart to degenerate into fatty tissue? Does alcohol affect all the muscles in a similar way, or is the heart the only muscle thus affected?

5. Is beer as dangerous used as a beverage as distilled liquors? Give reasons for your answer.

6. What becomes of nicotine when tobacco is smoked?

7. How does the way in which tobacco causes thirst differ from the way in which alcohol produces it?  
(Select five.)

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#### ANSWERS TO PRECEDING QUESTIONS.

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GEOGRAPHY. 1. The peculiar character of the African continent is generally assigned as one of the minor causes which aid in producing the warm climate of southern Europe. The winds from the Sahara are sometimes so hot as to destroy vegetation.

2. Marseilles is an ancient city. Its advantageous situation has been one of the causes of its long life. It is the natural outlet of the rich Rhone valley, and since the opening of the Suez canal, a brisk trade with the eastern countries has developed. Its manufacturing interests are large. It is the third city in France in point of size and ranks as the first commercial port of the Mediterranean.

3. The Manchester Ship-Canal connects the city of Manchester, England, with Liverpool and the sea. It is about 35 miles long, with a normal width of 120 feet on the bottom and a constant depth of 26 feet. It commences with certain docks and basins in the city of Manchester and follows the Irwell to its junction with the Mersey, and the Mersey to near Runcorn, crossing the two rivers thirty times in a distance of 14 miles. From Runcorn, it skirts the estuary of the Mersey until it merges into it at Eastham. The canal cost \$75,000,000, and was backed by the merchants and business men of Manchester. By converting Manchester into a port, the canal has lessened considerably the shipping interests of Liverpool..

5. The country is traversed by north and south ranges of mountains, the soil in the intervening valleys being poor and of an alkaline character. However, the barrenness of the region is due rather to the great scarcity of rainfall than to the poverty of the soil. The Sierra Nevadas shut off the moisture from the Pacific, the mean annual rainfall varying from one to fifteen inches with very rapid evaporation. In places where irrigation has been found to be practicable, the soil has proved very productive.

6. The grain goes entirely by rail to various eastern ports; or, by rail to the Lakes and thence to New York; or, by way of the Mississippi and the Gulf.

PHYSIOLOGY.—3. A muscle is soft and reddish and larger than its tendon which is hard and whitish. The muscular force is transmitted by the tendon to the part in which it is invested.

4. The cuticle is that superficial layer of skin which, in cutting, is passed through before nerves or blood vessels are reached. The nails and the hair are modifications of the cuticle.

5. Food substances must be changed into blood before they are ready to nourish the body. The various steps in the process are called mastication, insalivation, deglutition, stomach and intestinal digestion and absorption.

6. Men and animals derive their food supply from the vegetable and animal life of the earth.

9. The animal organs most useful for illustrating physiological instruction are a beef's heart, a frog's foot, a sheep's lungs and a tadpole's tail. Such a method has the advantage which practical illustration always has over a mere statement of facts. Seeing is, in this case, not only believing but also understanding.

ARITHMETIC.—2. This question is not intelligible. It is evidently a misprint. 3. See State Manual.

4.  $\$430,000 \times 1\frac{1}{8} = \$5160$  the amount of tax collected;  $5\%$  of  $\$5160 = \$258$ , paid for collecting;  $\$5160 - \$258 = \$4902$ , the net tax.

5. We have supposed that "board measure" means that the boards are to be one inch thick. Then each board being 16 ft. long, 18 in. wide and 1 in. thick, will contain 24 board feet. Eight boards of this kind can be cut from the log. The boards will contain  $8 \times 24 = 192$  board feet.

6. 1 lb. avoirdupois = 7000 grs.  $2\frac{7}{8}$  lbs. avoirdupois = 17937.5 grs.  $2\frac{1}{8}$  lbs. @  $\$38$  a lb. =  $\$97\frac{3}{8}$ , the cost of the quinine.  $17937.5$  grs. @  $\$.02$  a gr. =  $\$358\frac{3}{4}$ , the selling price of the quinine.  $\$358\frac{3}{4} - \$97\frac{3}{8} = \$261\frac{3}{8}$ , the amount gained.

7. Ratio and proportion involve addition, subtraction, multiplication, and division. It is obvious that these four fundamental principles must be understood before ratio and proportion can be mastered.

$$8. \sqrt{25 \times 50 \times 50} + 25^2 \times 50^2 \times 50^2 = 3906250250.$$

GRAMMAR.—1. A phrase is a group of words expressing an idea but not constituting an entire proposition; as, in the sentence, "He has labored *in vain*." A part of a sentence, consisting of a proposition, or two or more propositions grammatically combined, may be called a clause; as, in the sentence, "We will go, *when the boat arrives*."

2. "Leaves" is the subject of the verb "were." Green is an adjective modifier of "leaves." "Here" is an adverbial modifier of "were." "But" is a conjunction connecting the principal proposition, "Green leaves were here," with the subordinate proposition, "but 't was the foliage," etc. "T" is subject of the subordinate proposition. "Was foliage" is the predicate. "The" is an adjective modifier of "foliage." "Of rocks," "of birch," "of yew," "of holly," and "of thorn" are prepositional phrases modifying "foliage." "The," "the," "the," "the," and "the" are adjective modifiers of "rocks," "birch," "yew," "holly" and "thorn." *Bright-green* is a compound adjective modifying "thorn." "With islands" is a prepositional phrase modifying "foliage." "Hanging" is an adjective modifier of "islands." "Of furze" is a prepositional phrase modifying "islands." "Resplendent" is an adjective modifier of "furze."

3. An adverb may be used to modify some form of verb; as, in the sentence, "He studies *diligently*." It may be used to modify an adjective; as, in the sentence, "That boy is *extremely* cautious." It may be used to modify another adverb; as, in the sentence, "The rabbit moves *very* quickly." It may be used to modify a preposition; as, in the sentence, "The spider hung *exactly* over his head."

5. "The man has *a little* honesty." "The man has *little* honesty." We would consider the "man" of the first sentence as possessing more honesty than the "man" of the second sentence. The first sentence would lead us to think of the "man" as honest, though not entirely so; while the second would cause us to almost consider him as possessing no honesty whatever.

HISTORY.—1. By "free coinage" is meant the coining by the government of private bullion without expense to the owner of the bullion.

2. In general those Articles which provide for the country as a whole were suggested by the State Constitutions; for example, the President, the Congress, and the National Judiciary, with their distinctive powers, were suggested in this manner. In general those provisions which regulate the conduct of the States toward each other and the general government were invented. The principal experiment of the Constitution was the establishment of the Electoral College. A system of Federal Courts harmonizing with the State Judiciary was also a novelty.

3. "Clay was unquestionably one of the greatest orators that America ever produced; a man of incorruptible personal integrity; of very great natural ability, but little study; of free and convivial habits; of singularly

winning address and manners; not a cautious and safe political leader, but a splendid party chief, idolized by his followers. He was actuated by a lofty national spirit, proud of his country, and ardently devoted to the Union."—(*App. Dict. of Biog. Vol. 1*).

4. The two chief features of this treaty were a settlement of the boundary between Great Britain and the United States on the northeast, and a promise of mutual support in the suppression of the slave trade.

SCIENTIFIC TEMPERANCE.—1. Salt, arsenic, strychnine, opium, nux vomica, tobacco, capsicum, Cayenne pepper, sugar, kerosene, potash, oil of juniper, copperas, Indian hemp, darnel seed, extract of logwood, salts of zinc or lead, alum, bismuth, sulphur, nitric acid, sulphuric acid, butyric acid, oil of vitriol, cocculus indicus and water are some of the things with which wines, beers, and other liquors are adulterated.

2. Water is not a food in the usual sense, because it does not nourish tissue or furnish heat. Water, salt, potash, peroxide of iron and some other things are sometimes called *auxiliary foods*, because they aid the tissue-forming and heat-giving foods in the performance of their functions.

3. The functions of a true drink are, principally, to allay thirst and to sustain the circulation.

4. Alcohol interferes with the oxidation of the heat-giving foods, causing an unnatural and unhealthy accumulation of fatty materials in the blood. Very frequently this fatty material is deposited in the muscular tissues, thereby inducing that diseased condition known as fatty degeneration. The organs most liable to fatty degeneration of their structures are the heart, the liver, the kidneys, and the walls of the blood vessels. The entire muscular structure of the body may also become infiltrated with oily and fatty deposits.

5. Distilled liquors contain a much larger per cent. of alcohol than is found in beer, and are therefore more injurious than beer when used as a beverage.

6. When a pipe is used a large amount remains in the bowl and the stem. The part that is taken into the mouth is absorbed by the mucous membrane and enters the blood.

7. Alcohol produces thirst by absorbing the water from the tissues. Tobacco produces thirst by causing a continual waste of saliva.

HISTORY OF CIVILIZATION.—1. Each ancient civilization seems to have emanated from a single idea. In Palestine, the principle of theocracy took possession of society, while in Phoenicia, democracy was the dominant idea.

2. The characteristic principle of the theocratic form of government is the "divine nature of the ruler in the state." Authority, political and religious is generally exercised by a priestly caste, ruling in the name of the gods. Sometimes a king or a priest rules by virtue of his claim of divine descent. "Theocracy has nowhere produced marked intellectual or political advancement."

3. The ruling idea which controlled Greek civilization was the social principle, a democracy which developed individualism, the strength of which lay in the domain of the intellect. Theocracy implying the rule of a priestly caste, is the principle that controlled Egyptian civilization.

The single idea in Greece ran a brilliant career, but, being deficient on the practical side, it suddenly declined, and, disappearing from the place of its nativity, passed into the civilization of Rome. In Egypt the ruling principle resulted in a continued, monotonous, unprogressive and torpid existence. The influence of a single principle in both countries impressed a wonderful unity in relation to the things of life, and brought to an end the civilization of each.

4. Each ancient civilization appears as if it had emanated from a single fact. The civilization of modern Europe is diversified, and within it are found, existing together, all the principles of social organization.

Tyranny prevailed in the civilization of antiquity, but infinite gradations of liberty and influence prevail in the civilization of modern Europe. In the former all communities at every great epoch were cast, seemingly, in the same mold. In the latter all the elements of civilization live side by side.

5. The quotation means that preceding ages, institutions and civilizations have contributed thoughts, forces and facts "which find place in our civilization." Art from Greece, law from Rome, piety from Christianity, freedom from barbarism, are contributions of the past to the civilization of to-day.

6. He accounts for the "temporary progress" by indicating that the preponderance of one principle in ancient civilization was a condition that could exist in progress for a limited period only, since in the common course of earthly things no special power can drive from it every opposing tendency and reign without limitations as to locality and time. Complying with this law of earthly things, the dominating idea ceased to control after a temporary progress. He accounts for the "permanent progress" by saying that the various elements of European civilization, intermingling and struggling, are unable to exterminate one another, and each having to endure the others, all of necessity live in common, and, growing strong by their struggles, produce a progress that is permanent.

7. The Roman Empire was an association of municipal corporations, bound together by a chain-work of functionaries which firmly united the people and the imperial court. In that the Roman Empire was a despotism and not a central representative system, its government differed from that of the United States.

SCIENCE OF EDUCATION.—1. He means that systems are, in truth, but translations into human language of the thoughts of the Creator; that the study of this language is suggestive of moral truths, which, appropriated by the pupil, develop character and manifest themselves in real life.

2. The study of arithmetic, exhibiting the infinite grasp of numbers and unchanging laws of the science itself, tends to awaken thoughts of perfection in regard to the actions of life, and thus to some extent reveals the moral world to the pupil. The study of perfection in mathematical laws suggests perfection in character.

3. It might be expected that such a revelation would influence him to harmonize his life with that moral constitution.

4. The view is correct, for morality includes all that is truly good and it, and this degree of perfection is the highest human goal.

5. Character is a storage battery, in which the power acquired by our past acts is accumulated and preserved for future use. A sound moral character implies that the acquired power prompts motives only good, directs actions constantly in accord with such motives, and demands as a necessity the goodness of self.

6. Moral truths from nature, biography, literature, and from special incidents illustrative of some of the virtues, can, as occasion offers, be used to educate the moral nature of the child.

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## TOWNSHIP INSTITUTE OUTLINES.

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### GUIZOT'S HISTORY OF CIVILIZATION.

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#### TEST-WORK :—NOTES, TOPICS, AND QUESTIONS, FOR USE AT TOWNSHIP INSTITUTES.

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[The outline as found in the State Manual, together with additional topics and questions ; those in italics are from the Manual].

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#### LECTURE XII—THE REFORMATION.

- I. Scope of the Reformation.
  - a. *Characteristic difference between this age and preceding centuries* (315).
  - b. The Reformation a religious revolution (316).
  - c. *Age of the Reformation. Assign limits for the period* (317).
  - d. Attempts of fifteenth century completed (323).
  - e. *Significance of the Peace of Westphalia* (317).
- II. Great events during the period.
  - a. *First and greatest effect of the religious revolution on the state life of Europe.*
  - b. *Prominent historical events of this age.*
    1. In Continental Europe (318).
    2. In France (318).
    3. In Spain (318).
    4. In England (319).
    5. In Sweden (319).
    6. In Germany (319).
  - c. *Illustrate the greatness of the age.*
  - d. Changes in political institutions (320).
  - e. Changes in affairs of the Church (320).
  - f. Brilliant career of philosophy, literature, and colonization (320).
  - g. The Reformation the greatest event of the age.
  - h. *Danger of too early generalizations* (322, 315).
- III. *Various causes assigned to the Reformation.*
  - a. Sale of indulgences (324).
  - b. Rivalry of sovereigns with ecclesiastical power (325).
  - c. Desire of reforming abuses in the Church (325).



- d. *Guizot's view on the dominant characteristic of the Reformation* (326).
- e. *The state of the human mind at this period* (326).
- f. *The situation of the spiritual power* (327).
- g. *Leading cause of the Reformation* (328).
- IV. *The central purpose and result of the Reformation.*
  - a. *Result in Germany, Denmark, England, France* (329, 330).
  - b. *Result under various circumstances* (331).
- V. *Reproaches of the enemies of the Reformation.*
  - a. *Multiplies sects* (333).
  - b. *Licenses thought too freely* (333).
  - c. *Destroys spiritual authority* (333).
  - d. *Dissolves religious society* (333).
  - e. *Leads to tyranny and persecution* (333, 334).
- VI. *Weakness of the Reformation.*
  - a. *Failure to understand intellectual liberty* (334).
  - b. *Narrowness and inconsistency* (335).
  - c. *The event greater than the design* (333, 336-7).
  - d. *Further results of the Reformation* (337).
- VII. *Resemblance of destiny of civil and of religious society.*
  - a. *Beginning of the Christian and the civil society* (338).
  - b. *Revolutions of these two orders of society* (339).

## LECTURE XIII—THE ENGLISH REVOLUTION.

- I. *The two essential triumphant facts emerging in European civilization in the sixteenth century.*
  - a. *Free examination* (341).
  - b. *Absolute monarchy* (341.) *The defeat of absolute power spiritually, and the triumph of absolute power in the temporal order. Explain how both of these were advances in the march of civilization. When did these two triumphant forces first come into conflict* (259-261, 242)?
  - c. *What is the true sense of the English Revolution* (342)?
- II. *Why did the political revolution occur earlier in England than on the Continent—i. e., more nearly co-incident with the religious revolution? Consider on this point:*
  - a. *The new illegal principle of monarchy asserted by the Tudors and the Stuarts* (342).
  - b. *The political aspects of the Religious Revolution* (343).
  - c. *The minor nobility and their wealth in the Commons* (344).
  - d. *The intellectual movement of the age of Elizabeth* (344).
  - e. *Early foundations of the free institutions of England. Magna Charta. Growth of the Commons* (345, 346).
  - f. *Of what four elements did the free institutions of England consist in the seventeenth century* (347)?
- III. *The relation of the friends of religious liberty to the friends of political liberty in this revolution.*
  - a. *Want of religious liberty and political liberty* (347).
  - b. *English revolution essentially political* (348).

- IV. *Characterize the Parties of the Revolution, and notice the results of their respective attempts at government.*
- The pure-monarchy party (349-50).
  - The political-revolutionary party (351).
  - The republican party (351-353).
  - Failure of the three parties (354).
- V. *The Government of Cromwell.*
- Compare Bossuet's and Guizot's estimate of Cromwell (354, 355).
  - His effort to govern by a parliament (356).
  - How the Protector was regarded (357).
- VI. *Reasons for the Restoration and the nature of the government (357).*
- The Restoration pleasing to the Nation (358).
  - The government of Clarendon (358, 359).
  - Character of the Cabal ministry (360).
  - National party in power (361).
  - A career of absolute power (361).
- VII. *Character of the combination against James II.*
- A political and a religious struggle (362). The struggle of states, a strife between absolute power and liberty going on in Europe (362-3).
  - League against Louis (364).
  - Absolutism attempted by James II, in England, prevented by William of Orange (364).
  - Revolution of 1688, an attempt to abolish absolute power in the temporal order (365).

#### LECTURE XIV.—THE FRENCH REVOLUTION.

- I. *Difference between English and Continental civilization.*
- Distinguishing trait of English civilization* (370).
  - Compare with the Continent* (371).
  - A simultaneous development of every social element, the essence of liberty (372).
  - Consecutive development displays more rational vigor (373).
  - Influence of general ideas in England and in France, comparatively. Why?* (372-374.)
- II. *French influence in the seventeenth and eighteenth centuries.*
- Cause for this influence (375).
  - Relative influence of the French government and of the French nation. When was each predominant* (376)?
- III. *The government of Louis XIV.*
- Its external splendor (377).
  - Good effect of the King's activity (378).
- IV. *Influence of the wars of Louis XIV in the development of French history.*
- First European wars (379).
  - Distant wars (380).
  - Wars of Louis, political.
    - Results prove this fact (381).

- V. Diplomacy of Louis XIV.
- a. Origin of diplomacy (381).
  - b. Character of diplomacy changed under the influence of Louis (382).
  - c. The policy of Louis, the aggrandizement of France (383).
    1. Proof of this (383).
  - d. Ability of French diplomatists (384).
- VI. The administration of Louis XIV.
- a. In what administration consists (385).
  - b. Administration difficult till his time (385).
  - c. Assistance of great administrators (386).
  - d. The great ordinances passed by Louis (387).
  - e. His government a power sure of its position (387).
  - f. Government of Louis compared to that of Philip II (388).
- VII. Causes of the speedy decay of absolute power.
- a. Institutions wanting to France in the time of Louis (389).
  - b. Lack of protection to country and government (390).
- VIII. Philosophical Revolution.
- a. *State of the French mind in the eighteenth century* (391).
  - b. *Decline of the influence of the government* (391).
  - c. *Spirit of free inquiry* (392).
  - d. *Boldness of the French mind* (393).
- IX. *Final conflict between free inquiry and absolute power.*
- a. Leading fact of the English revolution repeated in France (394).
  - b. All human power should be limited (395).

#### NOTES ON THE "HISTORY OF CIVILIZATION."

1. This great event of the sixteenth century, when the doctrines and customs of the Roman Church were first successfully called in question, resulting in the separation of a large number of the population of Europe from that church, is usually dated from the year 1517, when Martin Luther, a German monk, began to oppose the Pope, and to condemn the practice of selling indulgences. The doctrines which Luther gradually asserted were expounded and fixed in the Confession of Augsburg by his disciple Melancthon, and are such as are generally recognized by the term, "Protestant." The struggle between the Roman Catholics and the reformers raged throughout Europe till the close of the thirty years' war (1619-1648).—*Wheeler*.

2. There was at this time something in every class of society that pre-saged a Reformation. In every quarter, signs were manifest, and events were pressing forward that threatened to overturn the work of ages of darkness, and to bring about "a new order of things." The light discovered in that age had communicated to all countries, with inconceivable rapidity, a multitude of new ideas. The minds of men, which had slept for so many ages, seemed resolved to redeem by their activity the time they had lost. They had left them idle and without nourishment, or to have offered them no other food than that which had so long sustained their languishing existence, could have shown great ignorance of human nature. The mind of man saw clearly what was, and what was coming, and surveyed with daring eyes the immense gulf that separated these two worlds. Great princes were seated

upon the throne ; the ancient colossus of Rome was tottering under its own weight ; the bygone spirit of chivalry was leaving the world, and giving place to a new spirit which breathed at the same time from the sanctuaries of learning and from the dwellings of the common people. The art of printing had given wings to the written word, which carried it, like certain seeds, to the most distant regions. The discovery of the Indies enlarged the world. \* \* \* The world was in expectation. Luther appeared.

—*D' Aubigne.*

3. The government of Cromwell, though in form a republic, was in truth a despotism, moderated only by the wisdom, the sober-mindedness, and the magnanimity of the despot. The country was divided into military districts ; those districts were placed under the command of major-generals.

\* \* \* While he lived his power stood firm ; an object of mingled aversion ; admiration and dread to his subjects. Few, indeed, loved his government ; but those who hated it most, hated it less than they feared it. Had it been a worse government, it might perhaps have been overthrown in spite of all its strength. Had it been a weaker government, it would certainly have been overthrown in spite of all its merits. But it had moderation enough to abstain from these oppressions which drive men mad ; and it had a force and energy which none but men driven mad by oppression would venture to encounter.—*Macaulay.*

4. With the life of the Protector, almost immediately ended the government which he had established. The great talents of this extraordinary person had supported, during his life, a system condemned equally by reason and by prejudice ; by reason, as wanting freedom ; by prejudice, as an usurpation ; and it must be confessed to be no mean testimony to his genius, that, notwithstanding the radical defects of such a system, the splendor of his character and exploits renders the era of the Protectorship one of the most brilliant in English history.—*Fox.*

5. The long wars in which France had been engaged, the tyranny, profligacy, and misgovernment of the ruling classes, the great and increasing burden of the public debt, together with the spread of new ideas concerning the rights of man and the relations of the citizen to the state, and a general awakening of the mind and conscience touching the great problems of politics and religion—these culminated (with the aid of the example afforded by the struggle for independence in America), towards the close of this century, in that great social uprising known as the French Revolution. The desperate condition of the finances made necessary in 1789 the calling together of the States General (an assembly of the clergy, the nobility, and the third estate, or commonality) which had not assembled for nearly two hundred years. This was quickly transformed into a National Assembly which proceeded to make rapid and sweeping changes, overthrowing the old privileges of the nobility, and mapping out France into new territorial divisions. The National Assembly was soon succeeded by the so-called Legislative Assembly and the National Convention. By the latter, in 1792, the abolition of the monarchy was decreed, and France was proclaimed a Republic.—*Wheeler.*

6. The same movement in the minds of men which brought about the revolution in England was the cause of that in France in 1789. Both belong to the third era in the progress of social order—the establishment of representative government—a point towards which the human mind is directing itself from all parts.—*Madame De Stael*.

7. It [French Revolution] was least of all a fortuitous event. It is true that it took the world by surprise; and yet it was only the completion of a travail most prolonged, the sudden and violent termination of a work on which ten generations had been laboring.—*De Toqueville*.

8. That event was a new phenomenon in politics. Nothing that had gone before enabled any person to judge with certainty of the course which affairs might take. At first the effect was the reform of great abuses, and honest men rejoiced. Then came commotion, proscription, confiscation, the bankruptcy, the assignats, the maximum, civil war, foreign war, revolutionary tribunals, guillotines, voyages, noyades, fusillades. Yet a little while, and a military despotism rose out of the confusion, and threatened the independence of every state in Europe. And yet a little while again, and the old dynasty returned followed by a train of emigrants eager to restore the old abuses. We have now we think the whole before us. \* \* \* It is our deliberate opinion that the French Revolution, in spite of all its crimes and follies, was a great blessing to mankind.—*Macaulay*.

#### COMPOSITION.

##### I. Application of the Process of Description to the Wabash River.

- 1<sup>1</sup>. The Wabash River as to its co-existent attributes.
  - 1<sup>2</sup>. The purpose it serves.
    - 1<sup>3</sup>. Drawings of parts of Indiana and Illinois.
    - 2<sup>3</sup>. Highway of travel.
    - 3<sup>3</sup>. Promoter of civilization.
  - 2<sup>2</sup>. Cause of the river.
    - 1<sup>3</sup>. Rainfall in northern and eastern Indiana.
    - 2<sup>3</sup>. Configuration and environment of Indiana and Illinois.
  - 3<sup>2</sup>. Effect of the river.
    - 1<sup>3</sup>. Furnishes water supply for cities, etc.
    - 2<sup>3</sup>. Promotes agriculture in portions of Indiana and Illinois.
    - 3<sup>3</sup>. Advances the development of the race.
  - 4<sup>2</sup>. Time and place. (Time here means only the present.)
    - 1<sup>3</sup>. Is situated in northern and western Indiana, and between Indiana and Illinois. Its direction is west and south.
  - 5<sup>2</sup>. Under form the course of the river should be traced from Lake Celina to where it flows into the Ohio.
  - 6<sup>2</sup>. Its length, breadth and depth at different points and at different seasons of the year must be given under size.
  - 7<sup>2</sup>. The current at different points and the force must be given under resistance.

This outline is intended to show merely how the process of logical description is applicable to a particular object, the Wabash River. It was shown in the outline on composition last month, that an object is described by giving its attributes as a whole, then its parts with their attributes. Since the purpose of the description outlined here is mainly intellectual, that attribute which furnishes the most information is given first, which is purpose. Thus the purpose of the Wabash River is stated to be (1) the drainage of parts of Indiana and Illinois; (2) a highway of travel; (3) a promoter of civilization. It may be noticed that in giving attributes of relation, *cause* is mentioned secondly in the outline. Cause probably, next to purpose, is the most determining attribute, and thus, when expressed, furnishes the most information. So the cause of the river is stated to be (1) rainfall in northern and eastern Indiana; (2) configuration and environment of Indiana and Illinois. Effect logically follows cause. The effect is stated to be (1) that it furnishes water supply for cities, etc.; (2) promotes agriculture in parts of Indiana and Illinois; (3) advances the development of the race.

Further comment does not seem necessary to show the nature of the work in the application of the thought indicated in the outline to any particular object.

In writing out a description of an object the points merely indicated here would, of course, be treated fully. The law of *completeness* in composition work requires this.

GEO. W. NETT.

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## MISCELLANY.

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### THE NORTHERN INDIANA NORMAL.

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The Indiana Normal School, located at Valparaiso, is having its usual, or more properly, *unusual* prosperity. This school was started twenty-four years ago, with only thirty-five students in attendance. A remarkable thing about the growth of the school is that it has increased steadily, every year (with very few exceptions), showing an increase over the preceding year. Last year was the best in its history, the enrollment exceeding four thousand different students. This year, in spite of the election excitement and the hard times, the fall term enrollment equalled the enrollment of the fall term of last year, and the second term has already exceeded that of last year. The enrollment for this term is over *two thousand four hundred*, and yet this is never the largest term of the year.

The phenomenal growth through this long term of years is proof conclusive, that the work is of a superior character and has kept pace with the demands of advancing teachers. When the country is full of good schools it is an utter impossibility for a school doing only ordinary work to draw and *hold* such large numbers. The faculty is composed of men and women of unusual ability in their respective fields. The management pays liberal salaries and then demands the best.

The school is supplied with all the appliances necessary to first-class work. It has a good reference library, and each department is fitted up according

to the most advanced requirements. All the natural sciences are taught by the laboratory method.

Prof. Smith, in charge of the department of physics, has an apparatus by which he produces "X-rays" and gets results equal to those secured at Chicago University. The Pedagogical Department has recently been re-organized with Sanford Bell at the head of it, and this means that the work done is thorough and "up to date." In fact the whole course of study has been re-cast and modified to suit advancing ideas, and a new catalogue, giving these changes, will soon be issued. A postal card to the president will secure a copy.

H. B. Brown, one of the most remarkable school men in the State, started this school and has been at its head ever since. For the past ten years he has had associated with him, in the management of the school, O. P. Kinzie, a man only second to Mr. Brown himself in organizing and managing power. These men are both superior instructors, and in addition to the work of managing this large school do a great deal of teaching.

The school has no endowment and has no State aid and is asking no favors. It simply desires to be judged, impartially, by its fruits, and asks that all other schools be judged by the same standard. The writer recently spent a day in the school and was much pleased with what he saw.

*Later.*—Just as we go to press we receive the following: Vineyard Hall, one of the largest and best dormitories on College Hill, burned to the ground this morning. The dormitory contained sixty rooms, all occupied by students of the Northern Indiana Normal School. Several of the inmates had narrow escapes, being suffocated with smoke, and had to be carried from the burning building. The students lost all their property, valued at \$4,000. The loss on building and contents was about \$14,000, with insurance of \$8,400.

THE DELAWARE COUNTY EDUCATIONAL ASSOCIATION held its annual meeting at Muncie, January 15 and 16, 1897. The instructors were Prof. Arnold Tompkins of the University of Illinois, Prof. Stevenson of Greencastle and William Hawley Smith of Peoria, Ill. The program was interspersed with vocal and instrumental music, which was highly appreciated by the association. Fifteen pupils of the Muncie High School gave a dumb bell drill that would be hard to beat. Our meeting was not only a teacher's meeting but it was open for all who might care to attend. The school patrons and children came in great numbers. The Delaware County Court room could not hold all who desired admission. Mr. Tompkins said that this was the first meeting of this kind he had ever seen west of Pennsylvania. The lecturers were given the best of attention by the audience. Everybody seemed satisfied with the meeting. Much credit is due the executive committee and officers for furnishing such a program. Hereafter there will only be one meeting each year and that will occur on Friday and Saturday following Thanksgiving.

MARTINSVILLE, under the superintendence of W. D. Kerlin, has extended the high school course of study and secured a high school commission from the State Board of Education.

**ERRATA.**—*Dear Sir:* In looking over the report of this department on High School attendance, on page 11, I find that Marion county is done an injustice. We are very anxious that this error should be corrected through the columns of your JOURNAL. The report should be as follows: The attendance in the commissioned high schools for 1896, outside of Indianapolis, was 85 in townships, 38 in towns; in non-commissioned high schools in townships 221, in towns 76. Marion county has one of the very best high school organizations in the state and we are very sorry that the above error should occur. Trusting that you will make mention of this in your JOURNAL, I am,  
Yours very truly,  
D. M. GEETING.

**THE CENTRAL NORMAL COLLEGE** is progressing as usual and prospects for spring and summer attendance are excellent. Since the election the attendance has been very good, and the work, as usual, is up to the standard. There have been improvements made in the scientific department and also in the pedagogical work. Quite a great deal of work is being done in the line of literature and rhetoric, and the reading circle work is carried regularly. Practically the same old faculty is in charge; many of the teachers have been with the college from ten to fifteen years. This gives it its permanence and stability.

**POSEY COUNTY.**—The "Western Star," published in Mt. Vernon, gives its entire space in its issue of December 17 to the industrial and educational interests of the county. This is one of the most fertile counties in the state and its industrial and educational interests rank high. The paper is profusely illustrated and gives a good idea of the prosperity of the county. Much space is given to the Mt. Vernon schools, of which E. S. Monroe is superintendent.

**EXAMINATION OF EIGHTH YEAR PUPILS.**—Questions in reading for February will be based on "The Builders;" for March, "To a Waterfowl;" for April, "Santa Filomena." These selections will be found in Indiana Fifth Reader, pages 97, 278 and 237. Pupils should take copies of the selection to the examination. Scientific temperance included in the questions in physiology.  
J. M. SULLINS, Ch. of Com.

**THE RELATION OF SECONDARY SCHOOLS TO COLLEGES** is just now receiving much attention from the high school and college men of Indiana. So far as science subjects bear upon this topic, it will be given a prominent place on the program of the second annual meeting of the State Science Teachers' Association. This meeting will be held February 26th and 27th, 1897, in Science Hall of Purdue University, Lafayette, Ind.

"**THE VINCENNES**" is the name of a new college paper started at Vincennes University. It looks well and reads well. The bulletin for this school shows it doing well under the direction of its new president, A. H. Yoder.

**THE EATON** schools have the most prosperous year they have ever known. They are under the direction of W. O. Aspy, who is a skilled and efficient teacher.



ROCKPORT.—A free kindergarten was opened January 4, with an enrollment of thirty-three. A great interest is taken in the work and mothers' meetings will be provided for. Two extra teachers are employed this year and a two-story addition to one of the buildings added. Superintendent Morgenthauer, who is serving his third year, is placing the schools in excellent condition.

RANDOLPH COUNTY.—In December, the JOURNAL stated that Vigo was the only county that employed a special teacher in music. Information is now at hand that Randolph county now employs five special teachers of music and music is taught in all the townships save one. Good for Randolph.

THE VALPARAISO schools are reported in excellent condition under the supervision of C. H. Wood. Mr. Wood entered upon his work here two years ago under most unfavorable circumstances, but has managed so well that he now has the good will and support of pupils, teachers and patrons.

THE SPRING TERM of the Indianapolis Normal School, department of the Indianapolis Business University will open April 5. Dr. Eli F. Brown continues as principal. An attendance larger than ever is confidently expected.

DEPAUW UNIVERSITY has opened its new term with most of the old students and many new ones.

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### PERSONAL.

MISS ANNETTE E. FERRIS is principal of the high school at Thorntown.

J. M. CALAHAN, a well known Indiana teacher, is now a "fellow" in history at Johns Hopkins University.

W. H. ELSON, formerly of this state, now superintendent of the schools of Superior, Wis., reports his work as pleasant and prosperous.

HIRAM HADLEY, formerly one of Indiana's leading teachers, is now vice-president in charge of the University of New Mexico at Albuquerque.

J. P. FUNK is now serving his tenth year as principal of the New Albany High School, and every thing connected with the school indicates prosperity and good work.

R. G. BOONE, president of the Michigan State Normal, but formerly one of Indiana's leading educators, recently addressed the New York City Teachers' Association.

Arnold Tompkins made the annual address before the Michigan State Association and a Michigan man speaking of it says: "It was remarkably fine and gave eminent satisfaction."

T. J. BASSETT, principal of the preparatory department of DePauw University, is one of the popular institute instructors of the state. He does a variety of work and does it well. Possibly he may yet have some unneeded week for next summer.

E. E. BARRETT is entering upon his fourth year as assistant superintendent of the Reform School for Boys at Plainfield.

MICHAEL RILEY is principal of the Wayne Township High School, located at Ben Davis. This is the only "commissioned" high school outside the incorporated towns and cities in Marion county.

R. A. OGG, superintendent of the Greencastle schools, was elected president of the State Teachers' Association. Mr. Ogg is one of Indiana's most capable superintendents and merited the honor conferred upon him.

W. D. CHAMBERS who has charge of the normal department of Borden Institute, reports the school in excellent condition, last year being the best in its history. Mr. Chambers is serving his second year at Borden at an increased salary.

FRANK BRUBECK, principal of the schools at Boswell, recently brought fifteen of his more advanced pupils to Indianapolis and spent two full days in seeing the sights. The value of such trips, as a means of education, is admitted by all.

W. F. L. SANDERS, superintendent of the Connersville schools and who answers the State Board questions for the JOURNAL, is just recovering from a long and severe attack of illness. For a time his friends feared that he might not recover, but we are glad to announce that he hopes to be "as good as new" in a few days more.

A. C. SHORTRIDGE, the first superintendent of the Indianapolis schools, was a charter member of the State Teachers' Association, organized in 1854. Up to 1896 he had never missed a meeting and never failed to pay his annual dues. Sickness prevented him from attending the last meeting, but he was made an honorary member of the association by a unanimous vote.

MISS MARIE DUNLAP, teacher in the Lebanon High School, was found dead in bed on the morning of January 15. She had been suffering from toothache and to relieve the pain had used chloroform and by accident took an over-dose. Miss Dunlap's home was at Princeton, where she had taught before coming to Lebanon. She was a graduate of the University of Indiana, class of '96. She read an excellent paper on "The Teacher's Preparation" before the late State Teachers' Association, an abstract of which will be found on another page. She was a superior teacher and a lady of more than ordinary ability and force of character.

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### BOOK TABLE.

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A NEW MAGAZINE OF PRACTICAL ART IN THE CLASSROOM, THE WORKSHOP AND THE HOME is issued by the Art Publishing Company, 411 Pearl street, New York. Pencil drawing, china painting, tapestry painting, home decorations, embroidery, all receive some attention in the January issue. Price of magazine, \$1.00 per year; 10 cents per number. We will send *Art* and the *SCHOOL JOURNAL* both for \$1.75 per year.

**A NEW READING CHART**—By Miss Mary E. Tooke, Rochester; Williams & Rogers, publishers. This Reading Chart is designed to meet the demands of the "New Education." It contains forty-five lithographed sheets, each sheet 26x36 inches, mounted on a standard of new and improved pattern. The chart covers the work of an entire school year of ten months. One page is devoted to each week of the month, treating of the different phases of nature prominent at that time, either plant or animal life, in an orderly sequence, while the last page of each month reviews the previous work of that month. The reading matter has been selected with great care and special reference to the illustrations. The month of February in which occur the birthdays of Washington and Lincoln has been set apart especially for the cultivation of patriotism.

**READINGS FROM THE BIBLE** selected for school use. Under supervision of Chicago Woman's Educational Union. Published by Scott, Foresman and Co., Chicago. This book is the result of a movement on the part of the late David Swing. He addressed a letter to Mrs. E. Strasburger Miller, vice-president of the Chicago Woman's Educational Union, proposing that a committee consisting of members of Jewish, Catholic and Protestant bodies be appointed, whose business it should be to compile from the Scriptures, a book of selections for use in schools. This book is the result of the labors of this committee. It contains 150 selections, sufficient to last the country school one year, reading one selection each day, and in the city with longer terms, each selection needs be read but twice. The book has met with great favor from leading educators.

**LEADING FACTS OF AMERICAN HISTORY**, by D. H. Montgomery, revised and brought up to date, is the book re-adopted for use in the Indiana schools for the next five years. No book on the list has given more universal satisfaction and in its new shape it is likely to continue a favorite with the teachers of history. It is not an easy thing to select from the great mass of matter that makes up the history of this country that which is most appropriate for a school history. Grant published two large volumes on the late war alone, and yet that covered less than five years of time. When it is remembered that a school history must come within one small volume and yet must not only treat of the late war, but of the war for independence, and the causes and effects of each, and of the growth of civilization in this country for four centuries, the magnitude of the task is dimly foreshadowed. The author of this book has shown much ability and has exhibited remarkable discriminating powers. The book is published by Ginn & Co., Boston and Chicago.

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## BUSINESS NOTICES.

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W. AUSTIN PRATT, All Souls Church, Colorado Springs, Colo.

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THE INDIANAPOLIS NORMAL SCHOOL department of Indianapolis Business University, by reason of its location and facilities offers superior advantages not to be found elsewhere. Tuition only \$1.00 a week or given absolutely free with the Business, Shorthand or Professional Penmanship and Drawing Course. Furnished room, 50 cts.; meals, \$1.75. Write for full information.

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## A CLASS IN GEOMETRY UNDER THE LABORATORY PLAN.

ADELIA R. HORN BROOK, EVANSVILLE.

Given, forty minutes and a class in geometry of twenty-eight pupils; required to find the best means possible under these conditions by which to secure the success of each pupil.

This is the practical problem which at a certain period of each school day confronts Mrs. Smith, a teacher of mathematics in a public high school. Let us observe and interpret the work.

At the beginning of the period each pupil takes his accustomed place at the blackboard, writes the numbers of the theorems which he is about to present, draws a diagram and begins his demonstration. The teacher takes a general survey of the work, records absences in her class book, observes that Mary has laid out a large task for herself, and that Susie, John and Albert have reached that difficult Th. 10. She notes that Abbie, the light-minded little beauty over in the corner, has just reached the chapter on polygons, and she hopes that the class lessons on that subject previously given will prevent her from taking up any of those remarkable mathematical notions with which she sometimes astonishes her classmates. Then Mrs. Smith walks over to Louisa, an intelligent looking girl, who has just completed the diagram of Th. 29, and asks her for her plan of proof, which is given in a low tone. As soon as the teacher is assured that the pupil understands the subject fully, she directs her to inspect and question on the 29th. Louisa steps into the middle of the room

to see who have the 29th and begins her round of inspection. The other pupils are still writing. "All who are interested in Th. 10 may give attention to Albert's work," says the teacher. A small group gather in front of his work, and a brief discussion of the principles involved in it follows. Susie, who had misunderstood a point, says, "I'll present it again," erases her own work and seats herself to study. Albert, who is with difficulty convinced of his error, is told to "present it again" and follows her example. Pupils are not allowed to present work again on the same day, nor to write a demonstration in advance of one not satisfactorily presented. As this group dissolves, a dozen hands are raised by those whose work is ready. Mrs. Smith appoints inspectors, sometimes merely directing an exchange of work, but usually sending pupils to examine the work of those less advanced in order that they may have the benefit of the review. As his work is passed, each pupil erases it, checks off the number of the theorem from his list and writes the next demonstration. Jessie, whose work has been examined by Louisa, calls the teacher's attention. "I did not understand about this proportion," she says, "but Louisa explained it to me. Shall I present the theorem again?" "Just as you think best," replies the teacher, who knows the girl's conscientiousness.

A group of boys, most of whom hope to go to the Polytechnic School, are working on a proposition given them yesterday. They are much impressed with it, because it came out of the Mathematical Monthly. They had never seen any mathematical publication except text books, and the Monthly, with its intricate diagrams, mysterious signs and unfamiliar terms was a revelation to them. They have drawn correct diagrams for the theorem and have made several sallies on various lines of argument, but in every case they have been clear-sighted enough to know that they have chosen a barred path. They now claim a share of the teacher's attention. "If we could prove these triangles equal," says Arthur, "we could prove the whole thing," and he outlines a demonstration on that assumption.

All agree that the proof of the equality of these triangles is the only thing lacking. "Draw an arc with this radius and this center," says the teacher, indicating as she speaks. He obeys. "A chord from this point, parallel to this line." "I see," says Paul suddenly, with that delightful expression of face known to teach-

ers as the outward sign of deepening insight on the part of the learner. He begins to explain, but she raises a warning finger to him. "Give the others a chance, Paul."

Reluctantly, but knowing she is no longer needed, she leaves this group. After surveying the room and sending three or four pupils on errands of inspection, she stops in front of Lucy's work, thus shattering that young lady's last hope of slipping some poor work through uninspected. Poor Lucy belongs to that type of pupils whose mental activity is mostly directed towards trying to make their teachers believe that they have learned their lessons and deserve a good mark. She does not like the laboratory method. She greatly prefers the class method, especially those features of it which would cause her classmates to write the same demonstrations at the same time that she does and on space adjoining hers, because that arrangement would greatly promote her convenience in copying from them. She has been in the school only a short time and she misses other conveniences of the class method of recitation. "In the school where I was before I came here," she remarked to an acquaintance, "we just had two propositions every day, and if you didn't know your lesson very well, some of the scholars would explain it all out when they recited. And the class was so big that you didn't get called on very often."

Every experienced teacher has had pupils of the wretched, tricky type to which Lucy belongs, and knows the special difficulties which pertain to the teaching of mathematics, a science of "things as they are" to a pupil who is constantly trying to represent "things as they are" not. The cold exactitudes of mathematics are not readily grasped by a slippery little mind which is spending what power it has in trying to escape from what is to it a distasteful burden, while making a pretense of carrying it.

And yet the uniform requirements of class work are very likely to drive the incapable into some pretense of furnishing that which they are really unable to produce.

The case of Lucy demands special care from Mrs. Smith. She is a student of educational psychology, and under the instruction of men and women of broad sympathies and lofty ideals, she has learned to look with scientific interest upon cases of the abnormal and to adjust her treatment to their needs. She remembers with keen regret that before she came under this instruction, she usually failed in such cases, because she applied the "righteous

indignation" which, under the old school of educational practice, those cases were supposed to demand—a method on a par with the bleeding of fever-weakened patients, which was customary a few decades ago. She realizes now that it is as absurd to be resentful towards a case of trickery as towards a case of diphtheria, and both require careful treatment.

Mrs. Smith sees that instead of reasoning out her demonstrations, Lucy has memorized them imperfectly without understanding, and that she has presented a quantity of illogical stuff, neatly arranged, hoping to pass it. The teacher's first effort is to cause the logic of events to convince her of the futility of such a course. The diagram is very neatly drawn. She praises that and then considers the demonstration. With a few well directed questions, she brings Lucy's cardboard logic to the ground. There is no reproach in the manner or matter of the questions, merely a quiet unearthing of error. As Lucy hears the teacher's "present it again," tears of chagrin spring to her eyes. Mrs. Smith observes them with the silent hope that the practical moral lesson will be salutary. Some day after school she will have a quiet talk with Lucy, who may be longing to pour out her confidence to her now. The mentally and morally weak generally reach out for help when they find themselves at the end of their own poor little resources. When Lucy is ready to drop her flimsy subterfuges and present each day some thorough, honest work, be it ever so little, she will have made a distinct advance in morals and mathematics.

"Don't begin any new demonstration," says the teacher to those still at the board. Among those who have finished writing are some of the quickest and brightest pupils. From these, she selects inspectors to examine some of the remaining work.

Tom, an awkward, over-grown youth, is gazing gloomily at his half-finished demonstration when she approaches him. He is a slow, stumbling student, but determined. His heavy mind makes strange plunges sometimes in its strong efforts, and it needs frequent opportunities to steady itself by contact with that of the teacher. He has been wanting her attention for several minutes, and she knew it, but she also knew that he would profitably wait. "What is it, Tom?" "I can't do anything with this. The teacher used to say I was stupid, and I guess—" "Ask me a question about it," says Mrs. Smith, interrupting his ill-timed



confidences. She is full of respect and sympathy for him in his struggles, but the class-room is not the place for the expression of personal sentiments. Tom brings himself out of the depths of his gloom and discloses his difficulty. Inwardly grateful to him for showing her a new way in which Th. 3 may strike a dull mind, she sets him right and proceeds to investigate Clara's mental condition.

Clara has just returned after a few weeks' illness, and her work is, of course, far behind that of the others. The theorem she presents happens to be a very important one. After questioning her slightly, Mrs. Smith tells her to leave the diagram on the board and then gives orders to the class: "All work erased. Class seated. Attention to Clara's work." Nearly fifteen minutes remain and these are for class work. Clara states the theorem and gives the demonstration she has learned. Paul outlines a demonstration founded upon principles which Clara has not yet reached, although most of the class have, and they approve his argument. Guy starts out on a promising demonstration which turns out to be founded upon an impossibility. The raised hands and smothered exclamations of the class warn him of his mistake and he sits down suddenly.

Mrs. Smith has prepared other class work for the day, and took up this proposition incidentally, because she saw the chance to make this basic principle clear and emphatic with Clara, while giving at the same time an opportunity to the rest of the class of retracking the old brain paths with some divergences. The class work to-day is planned to meet a special need. There are some minds in every ordinary class which absolutely need to be approached through the concrete. The power of abstract reasoning is acknowledged to belong to better or more highly developed minds. To illustrate, mathematical weaklings are more likely to comprehend the reasoning which establishes the proposition, "The areas of similar polygons are proportional to the squares of their homologous sides," after they have fixed that fact in their minds by constructing similar polygons and finding their areas. For securing definite ideas of geometric forms and the realization of their relations, nothing is so useful to beginners as those constructions which compel the learner to visualize the forms, and those computations which compel him to observe their numerical relations. Beginners in geometry are nearly always weak in their powers of generalization.

For these reasons, Mrs. Smith, having arranged her material and had it published, always devotes the first few weeks of work of a geometry class to what is known as concrete geometry, by which the pupils are helped to realize many geometric facts and are gradually led into mathematical argument. Preferring that her pupils shall reach mathematical truths by inductive reasoning when they are capable of it, she continues to assist the incapable by presentations of the concrete.

With this intention she says, "All who have not reached Th. 15 may open their books and read the theorem." She writes on the board a simple problem illustrating that proposition, and calls on the whole class to solve it. About one-fourth of the class have their books open and work the problem by the help of the theorem. To the others it is merely a useful review in the way of an application of a principle which they have already reasoned out. While the class are working, she writes a second problem. After hearing the answer to the first, she says, "All who have had this work before and understand it may give attention to their own work." The advanced pupils readily use this permission. She has called this subject into their consciousness once more by the problem, and she does not wish to waste their time and dull their attention by holding them to any further consideration of it. Moreover, she wishes to devote herself unhindered to the help of the weak remnant, who are anxious to question her. As she begins to work with them, the bell rings, and with interest aroused, but unsatisfied, they are obliged to stop. "I think you can get it by yourselves now," is her parting word to them. The class withdraw. The teacher gathers up and lays aside the original work which the pupils had placed on her table when they came in, and awaits the incoming class.

The aim of the work sketched here is to promote the self-activity of each pupil by securing to him free opportunity for advancement, appropriate stimulus and only the needed assistance. Among appropriate stimuli, the interplay of the social feelings is recognized and freely used.

In considering the limitations of the method, we see at once that it is not practicable in a badly disciplined class, but it is difficult to find a method which is. With an ordinary class, these plans greatly reduce the difficulties of discipline. Mischief is as unpopular in the class as horse stealing in a new country, and,

for a similar reason, it is destructive to the interests of the many. A pupil who should make himself a disturbing element in the scene would be promptly excused from the class-room in the interests of the remainder.

Again, it is not successful in the hands of a teacher who does not thoroughly understand her subject. What method is? It is an encouraging fact to a young teacher, anxious to do her best, that if from day to day she faithfully prepares herself to be helpful to her most advanced pupil, the repeated presentations of the parts of the subject by the others, and the preparation and correction of written tests will familiarize her with the subject very quickly, and, at the same time, she will learn how the minds of pupils react upon certain portions of the work. To gain this knowledge requires many years under methods which induce pupils to make as brave a show as possible in the recitation and thus prevent the full disclosures of their difficulties. Laboratory methods are very hopeful for young teachers who wish to lose the troublesome elements of inexperience as soon as possible.

That it is in itself harder upon the teacher than the class method, I deny. The effort to keep order in class and to hold the attention of every pupil during the wholesale explanations required by the class method, explanations, which if frequent, bore many of those who do understand them and bewilder those who do not, is a greater strain upon the teacher's nerves than the multiplied light touches upon individual minds characteristic of laboratory methods. At first, while the interest in the subject is fresh, all work together, receive instruction in common, and are easily handled in mass. Gradually the distance between the workers widens, but the teacher is gaining a clearer understanding of the pupils and their work, and is inspiring them with the common aim of comprehension of the subject. And the pleasure in watching the mental growth of individuals and in recognizing her own helpfulness to that growth which comes to a teacher, who is allowed to carry out such methods fully, is a constant reward.

Among the results of the laboratory methods as compared with the class method when used by the same teacher, are clearer comprehension of the subject; greater desire for study; pleasanter relations between teacher and pupil; enlarged opportunities for the specially gifted; and particularly a wholesome training of the will of each pupil.

## AUTUMN TRAVELERS—NO. 4.

PROF. D. W. DENNIS, EARLHAM COLLEGE.

## MIMICRY AND WARNING COLORATION.

During the two weeks following October 16, Miss A. and her school doubled their usual time for nature study, as Paul and Johnny told me when we started out on our fourth excursion, October 30, because they would so soon be shut in for the winter.

James and Joseph had been sent to some old unpainted houses in Goosetown and directed to pull off any seeming splinters which they might find hanging down from the edges of the weather boarding. These were the cocoons of an insect covered in imitation of the weather-beaten building and shaped to resemble splinters; they brought some loose boards with the cocoons attached. These Miss A. said, like most of the cases observed two weeks before, illustrate mimicry for protection from enemies.

The green of the frog is another instance; it conceals the frog while it is on the bank, and generally the frog-pond contains green water moss, which helps to conceal him after he has jumped into the water. A frog was brought to the school-room for the study.

Miss A. also brought a flounder to school, and the children had so much fun over his two eyes on one side of his head and none on the other that Miss A. was obliged to let their curiosity and merriment have free course before she pushed the lesson of mimicry, which is rarely better shown than in this fish. After his "white" and the causes for it—his life always on one side and so close to the bottom—had been fully studied she read Holmes's "Fable Drawn From the Deep":

The fish called the flounder, perhaps you may know,  
Has one side for use and the other for show;  
One side for the public, a delicate brown,  
And one that is white, which he always keeps down.

A very young flounder, the flattest of flats,  
And they're none of them thicker than opera hats,  
Was speaking more freely than charity taught  
Of a friend and relation that just had been caught.

"My! what an exposure; just see what a sight;  
I blush for my race, he is showing his white.  
Such spinning and struggling—why, what does he wish?  
How painfully small to respectable fish."

Then said an old sculpin: "My freedom excuse,  
But you're playing the cobbler with holes in your shoes;  
Your brown side is up, but just wait till you're tried,  
And you'll find that all flounders are white on one side."

The children all recollected that on the way to the falls they had seen thousands of minnows, and that they are not easy to see until one here and there, for reasons which he himself best understands, "shows his white."

It was concluded that the kingfisher and other birds that live on fish are above the minnows, and that the larger fish that prey upon them also find them from above, and so their resemblance to the ground greatly protects them.

Miss A. also brought to school a "mounted" meadow-lark. Its colors on the under side are gay and striking; above they are dull. After fully considering the matter it was concluded that the enemies of the smaller birds are high flyers; that they see the smaller birds from above, and that mimicry on the under side of a bird is not so necessary as it is above; and all agreed to watch next spring and see if this peculiarity of the meadow lark is common among the smaller birds that are low flyers.

Miss A. asked the children one day what they knew of the bumble bee and the carpenter bee. Everyone knew the bumble bee and several knew that the carpenter bee so resembles the bumble bee, in the noise of its flight as well as in its appearance, that if one ventures to catch the carpenter bee he is likely to be stung by a bumble bee which he has caught by mistake. Miss A. explained that this is a case in which mimicry occurs not between the insect and its environment but between one insect armed with a sting for its protection and another which secures its immunity from danger from the fact that its enemies do not like to take the risks of being mistaken and being stung.

A most beautiful lesson came to the school from a source quite unexpected. Jennie brought a chrysanthemum to Miss A., and while all were admiring and examining it a white spider swung down from it on its web. All had looked closely at the flower but none had seen the spider until, a finger wandering too close to his habitat, he betook himself to mid air for safety.

Miss A. explained that the broom is a little shrub that grows in England and Scotland; that it was one of Wordsworth's favorites, and she read his "Oak and Broom," in which he says for the broom:

"On me such a bounty nature pours  
That I am covered o'er with flowers."

"These flowers," Miss A. said, "are yellow and the leaves green, and I have just learned from a poem by Mary Howitt that a yellow and green linnet nests in the bush :

"Take all the rest, but give me this  
And the bird that nestles in it. .  
I love it for it loves the broom—  
The green and yellow linnet."

Frank one day called up the case of the tiger and asked why it should resemble its grass jungles, as almost no animal is a match for it.

Miss A. explained that the tiger is only indirectly protected ; that he must catch his prey ; that he lives on the flesh of other animals that are fleet footed, and that his likeness to his surroundings enables him to come upon them unawares. Miss A. asked if anyone could then tell why the tiger, lion and cat have cushioned feet. After a long discussion it was agreed that these animals can thus approach their prey more noiselessly and that the cushions serve as sheaths for their claws and keep them sharp.

October 30th brought a mid-summer temperature. We went directly to the river by the site of the old suspension bridge ; a kingfisher met us on our arrival. Miss A. directed our attention to the color of the bird. "He is a light blue," said Joseph ; "I have often examined kingfishers closely." "A sky blue would be better," said Lucy, and the boys wisely refrained from joining issue with the girls in the matter of tints. "Can his color," said Miss A., "be of any advantage to him in either escaping from his enemies or seeking his prey?" "It surely can," said Paul. "I have often seen a kingfisher catch fish ; he perches on a limb over the stream, selects his victim below him and with a sudden swoop downward and a startling whirr he unerringly seizes on his prey. I should think his blue against the sky would help to conceal him from the fish below." Miss A. took from a roll she was carrying a picture of the great blue heron—the crane—and said, "he stands in the stream motionless, apparently asleep with his long neck coiled into an S and when a fish comes in reach of his bill he grasps it by suddenly straightening his neck and there cannot be a doubt that his blue color seen against the sky and his motionless, expressionless attitude greatly aid him in deceiving and catching the fish."

From the clump of trees just below Mering's old mill-dam Joseph drove an owl from its afternoon concealment. It so happened that it flew down within a few feet of the children. They were so astonished that they did not hear its flight. Lucy observed: "many small birds make the air fairly sing with silken music; how is it that we did not hear the owl at all?"

Miss A. asked, "what do any of you know of the feathers of an owl?"

"They do not lie down smooth, Miss A.," said James. "They are fluffed up somewhat like bangs."

"So as not to be obtrusive," Lucy added. "I see readily that this makes its flight noiseless, modest."

"But why should the owl have a noiseless flight more than any other bird?" asked Jennie.

"Does this help it in escaping from its enemies or in getting its food?" asked Miss A.

"Very greatly," said Frank; "it lives on small birds, rats, mice, weasels, etc., and it must approach them stealthily or it cannot catch them at all." "Yes," said Miss A., "like mimicry, this peculiarity of the owl conceals its approach and greatly aids it in catching its prey. It is one that adapts the owl to the kind of life it must lead."

"The subject of 'adaption' as science names it is one of the most interesting that we could possibly consider, and we could as well begin with the owl as anything else. The living bird can be studied in the park at Glen Miller and perhaps we can get an owl skin or a mounted owl to study at the school house." Paul and Joseph both knew of one which could be had and Joseph added: "The one which I will bring is a snowy owl."

Miss A. asked him to learn if he could whether or not this snowy owl did not inhabit northern countries and so illustrate mimicry.

This reference to mimicry seemed very unfortunate; for just then a pair of brilliantly colored butterflies came along and Joseph and Frank gave chase and soon returned with them.

"These," said Joseph, "could be seen any where by anything that can see. What does it mean, Miss A.?"

"The butterfly which you have taken," said Miss A., "is called *Danias Archippus*. It is hatched from an egg laid on the milk-weed or some kindred plant, the egg is conical and most beauti-

fully sculptured with about twenty-five longitudinal and transverse bars. From this hatches a larva or worm which grows to be nearly two inches long and is gaily marked with bands of white, yellow and black. This worm forms a chrysalis that is also very gaily marked with black and green and gold. This butterfly has been very carefully studied by Mr. Samuel H. Scudder and he finds that insects that usually feed on butterflies' eggs do not like the eggs of this one and that the larva and chrysalis and butterfly are all very distasteful to the enemies of butterflies in general. If this butterfly is crushed it emits an exceedingly disagreeable odor. Its bright color thus becomes its protection—a sign to the insect-eating birds that the morsel is not good.

"These bright colors act on the birds like the hum of the bumble bee does on boys and girls. Mr. Alfred Russell Wallace calls this *warning coloration*.

"It now becomes easy to see why this butterfly is so abundant. It is to be found anywhere in the United States, and many of them will be met with on any summer ramble; it is not good for anything and is harmless, and its own food the milkweed—is unfailing and widely distributed."

Miss A. continued, "the rattle of the rattle snake is another instance. When pursued or tapped on the head it coils up and sounds its rattle—warning the pursuer that further pursuit will be dangerous.

"Have not some of you," asked Miss A., "seen some animal very distinctly marked, so that it would be conspicuous in any landscape, and that is also very disagreeable?"

"I have, once," said Frank, "seen a skunk; it is black and white and has a great bushy tail; it is a very pretty little animal."

"These colors," said Miss A., "are due notice to all enemies that pursuit will be disastrous and but for the fact that it is very offensive to man as well as to its enemies, it would abound everywhere."

"It seems, Miss A.," said Jennie, "that you always make color useful; the animal sometimes resembles its surroundings that it may escape its pursuers; sometimes that it may deceive and catch its prey. Sometimes it resembles a stinging or poisonous relation for its protection; while this stinging or otherwise disagreeable friend has some striking tints or noisy qualities that serve for its protection because it *can* be seen. Again, you make



flowers showy and delightful in their perfume for their own good, not ours. Is there any room left for Gray's lines?

" 'Full many a flower is born to blush unseen  
And waste its sweetness on the desert air.' "

" It is not true," said Miss A. in response, " that nature is ever either wasteful or purposeless in the least particular. Men have often mistaken her purposes, or have only partially stated them. The beauty and odor of flowers help us but the real use of beauty is to help its possessor, whether it be man, animal, or plant and herein, when the case is understood, lies all the beauty. The Egyptians built pyramids, dug out great temples in their hills of rock and cut monoliths from granite that the world will never cease to think beautiful because they express so well the message of Egypt to man; solidity, strength, the power to defy time. Does not the mother redbird's drab become beautiful when we consider that it is worn for the sake of her children? Is any dress so becoming for a girl, so beautiful, as one which helps to make the maintenance of his honor easy or possible for her father? I have learned from nature and what I have seen of man that only the useful can be beautiful. I never see the delicate petals of the wild rose without thinking how warm the pistil was with these velvet cloaks tucked in about it all winter; I always give thanks in the language of the 'Woodthrush of Essex.'

'For art and labor met in truce  
For beauty made the bride of use,  
We thank thee.' "

Oh, such a commotion under the ground  
When March called, "Ho, there! ho!"  
Such spreading of rootlets far and wide,  
Such whispering to and fro.  
And, "Are you ready?" the snowdrop asked,  
" 'Tis time to start, you know."

"Almost, my dear," the Scilla replied;  
"I'll follow as soon as you go."  
Then "Ha! ha! ha!" a chorus came  
Of laughter soft and low  
From the millions of flowers under the ground—  
Yes—millions—beginning to grow.

## LEARNING TO USE OUR LANGUAGE.

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CHAS. A. McMURRY.

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The children in our common schools should learn to use what they learn from day to-day with quickness and ease. We are accustomed to say that children in ungraded and country schools are more independent, more self-reliant in mastering school studies than town or city children. This self-reliance should be constantly encouraged and developed in all our schools. The emphasis which has been placed upon apperception is an emphasis placed upon the use of our acquired knowledge. One of the most striking weaknesses of much of our teaching is that it does not develop power in the use of what we have learned. A large part of what is learned in schools has no application and is waste lumber. Again, a large part of what might be useful is not brought into service. That portion of school knowledge which is constantly worked over into daily use is small. This gives to all of our school education a strong theoretical and unpractical tendency. By practical, we mean not those things which lead to money-making and success in some particular calling. That education is practical which makes one strong and efficient in whatever he undertakes. There are two reasons why children should make constant use of what they are daily learning. First, they should feel that knowledge is for use and not for ornament; that conduct is worth a great deal more than theoretical knowledge; that study and thought mean but little unless they result in action. Second, children greatly need the confidence and encouragement which come from being able to make good use of what they have learned; they should be given daily opportunity to realize the growth of power and ability to use what they have learned. No character can be strong until it has acquired this sort of confidence.

The use of knowledge is the final test of its validity. For most people, it is much more difficult to use knowledge than to acquire it. Many people of good powers in the acquisition of knowledge never learn to use what they have learned and the school master is often puzzled to know the reason for it. But if we will consider for a moment the difficulties in learning how to use knowledge and how different it is from the simple acquisition

of studies, we shall not be surprised that so many bright people in the schools accomplish so little in life. The use of knowledge is a thing which should be taught to a considerable extent in our schools. It is not sufficiently taught at present. We have been accustomed to think that the school is the place to acquire knowledge and later life is a place to use it. But as has been recently said by a number of thinkers, "The school is not a preparation for life, it is life."

Children need to practice the use of knowledge during their school years so as to form those habits in the use of knowledge which they will need to follow when older. If the school period is a full section of life, it should show all the activities in full operation the same as at later periods.

It was remarked before that the use of knowledge was more difficult than its acquisition. The reason for this may be found in the self-activity and thoughtfulness required in applying knowledge to new conditions. In all the important affairs of life there is great demand for thoughtfulness, well balanced judgment and a judicious survey of all the circumstances. Even adult people are very slow to make a prudent use of their own knowledge and experience.

Turning back now to school studies, we find exactly the same difficulty in securing thoughtfulness from the children. If a new lesson is assigned them they will memorize and recite it, but if called upon to work out some problem based upon the studies of the previous term or year, they are at a standstill. In other words they can memorize new things but they are very slow in falling back upon their own resources so as to work their own way out of difficulties. Generally speaking, children are very inexpert in the use of their acquired knowledge, and it is a great drag upon their progress to feel the constant weakness and helplessness of this unserviceable body of knowledge. In later life, no person can amount to anything unless he has become a quick expert, a thorough master of his special business. He must have his resources at his immediate command. The principle of apperception when carried into full effect in our schools, will bring about in every recitation a more thoughtful use of previous knowledge and experience.

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*The Mother.* "Tenth in your class! Why I always used to be first in mine." "But, mother, my schoolmates are not nearly so stupid as yours."

## MUSIC IN COMMON SCHOOLS—No. 4.

W. E. M. BROWNE, NEW CASTLE, IND.

I am compelled to apologize for omitting the talk on music in the February JOURNAL; excessive duties in my schools consequent upon promotions rendered it an impossibility to find the necessary time. For this reason the article this month will be longer and cover more ground than the previous attempts. While more extensive, we will strive to be concise.

Every grammar grade pupil should be familiar with, at the close of the term of school, the ordinary nomenclature and theory of music, to the extent of knowing how to read the notes in all the keys and in the commonly used measures, also the signs for the same. While practice will bring perfection in the execution of this work, it is necessary that the theoretical knowledge be also well understood, to the extent that pupils can write for the teacher the reply, in his own language, to any question regarding the following definitions of musical terms and applications.

Teachers may best familiarize the pupil with them by presenting them in the form of a statement, afterwards using the question form, so that the reply written by the pupil can be used as a basis for grading him in his knowledge.

With the exception of the "Keys" the ground has already been practically covered in previous articles. It is understood that only elementary principles are discussed.

## TONES.

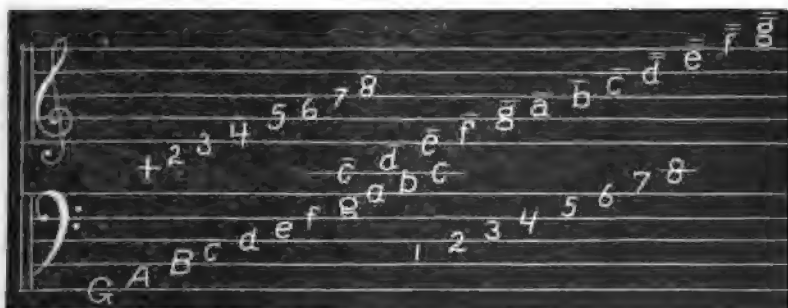
1. Singing is the production, by the voice, of musical sounds.
2. Musical sounds are called *tones*.
3. Tones possess *four* necessary qualifications, viz: Quality, Pitch, Length and Force or Accent.
4. *Quality* is the smoothness and clearness of the tone.
5. To acquire these we must breathe from the waist; form the mouth into the correct shape for each vowel and consonant sound, and articulate easily.
6. Children should not sing louder than they ordinarily talk.
7. Singing is only talking properly in a musical tone of voice.

## PITCH—BY FIGURES.

1. The Pitch of a tone is the *Highness* or *Lowness* of its sound.

2. Pitch may be shown by the *figures* 1, 2, 3, 4, 5, 6, 7, 8.
  3. The tones represented by these eight names, or figures, is called *The Scale*.
  4. The eight tones of the scale are different, each a step higher than the other.
  5. The *singing* names of the scale are the *syllables* Dō, Rā. Mē, Fā, Sō, Lā, Sē, Dō.
  6. An *upper* and *lower* scale may be used by making 8 of the middle scale 1 of the upper scale and 1 of the middle scale 8 of the lower scale.
  7. Songs or melodies may be written with figures, a short line being placed over a figure to show the upper scale and under the figure to show the lower.
  8. A long sound may be shown by a dash after the figure, thus 8—, and a short sound by a comma after the figure, as 8, .
- The knowledge of the primary pupil concerning the sounds of the scale and their correct pitch may be tested by singing easy melodies slowly and requiring them to write in a line on paper, or slate, the figure representing the different tones as they are sung.

## PITCH—BY THE STAFF.



1. The "Staff," "G" Clef, "F" Clef, Pitch names, and the "Natural Scale."
2. Pitch may also be represented by *The Staff*.
3. The *Staff* is five horizontal lines the same distance apart.
4. Each Line and Space of the Staff represents a different Pitch.
5. Lines may be *added* below and above to show a still lower or higher Pitch.
6. For low voices (men's) another staff is used.

7. The staff for high, or female voices is marked with the "G" or Treble Clef.

8. The staff for low voices is marked with the "F" or Base Clef and placed below the staff marked with the Treble Clef.

9. To write the Scale upon the Staff in its "Natural" position we place 1 upon the added line below in the Treble and in the second space in the Base.

10. The names of the lines and spaces are shown by letters—A, B, C, D, E, F, G.

#### LENGTH OF TONES.

1. A *note*, when placed on the staff, is a sign for a Tone.

2. Its position on the staff shows its pitch.

3. The *shape* of the note determines the length of the tone.

4. The *quarter* note may be called "the unit of tone length," and represents a tone about as long as occupied in taking a step in moderate walking.

5. The *half* note, a tone twice as long; a *dotted half* note three times, and a *whole* note four times as long as the quarter note.

6. The *eighth* note denotes a tone one half as long as the quarter note. (NOTE: The teacher will find these notes in the diagram, page 841, December JOURNAL.)

7. The *sixteenth* note, is like the *eighth* note, but has two hooks and represents a tone one fourth that of the *quarter* note.

8. A dot following a note adds to the length of its tone one half of its duration.

#### ACCENT.

1. When one tone is sung louder than another, we say it is accented.

2. Accents are shown on the staff by vertical lines drawn across it, called *Bars*.

3. The space between the Bars is called a *Measure*.

4. Each measure has one strong part and one or more weak parts; the strong part (or accent) is at the beginning.

5. The parts of a measure may be shown by motions of the hand; *down* for the accented part and *up* for the other part.

6. The parts of a measure are indicated by the figure at the

beginning. thus :  $\frac{3}{4}$  would denote 2 part measure,  $\frac{3}{4}$ , three parts, Down, Left, Up ; and  $\frac{4}{4}$  four part measure, down, left, right, up.

7. The lower figure of the measure sign indicates the length (shown by the note) of each part.

8. The signs for silence are called *Rests*, and correspond in duration to the notes for which they are named. (Examples of measures and rests are on page 841 December JOURNAL.

#### KEYS.

1. The scale may be written upon the staff in seven different positions ; i. e., 1 or D $\bar{5}$  may be either upon C, D, E, F, G, A, or B.

2. The position of 1 is told by the number of Sharps, or Flats appearing in the key sign.

3. The "*Key*" of any song is the pitch (letter) upon which 1 (the "key note") is placed.

4. The same letter in any part of the staff will have the same scale sounds.

5. The following table will show the different key-signs, name of key, and position of 1.

SHARPS. KEY. FLATS. KEY. POSITION OF 1 IN TREBLE STAFF

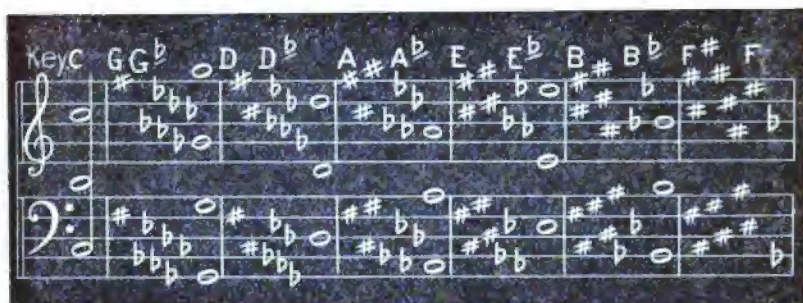
None	C	0	C	Added line below.
1	G	6	G Flat	Second line.
2	D	5	D "	Space below.
3	A	4	A "	Second space.
4	E	3	E "	First line.
5	B	2	B "	Third line.
6	F Sharp	1	F	First space.

It will be noticed that there are seven positions, and the number of sharps and flats in each position added together make seven.

6. The following will assist the pupil in remembering the key signs for each position ;

0.	2.	4.	6.	1.	3.	5.	Sharps.	} One is the reverse of the other.
C.	D.	E.	F.	G.	A.	B.	C.	
5.	3.	1.	6.	4.	2.	0.	Flats.	

7. The "sharp" indicates a tone a half step higher than that shown by the line or space on which it is placed, while the "Flat" shows a tone a half step lower. They are the black keys of the piano or organ key board.

8. Diagram of Key Signs and position of 1 or D<sup>5</sup>.**DEPARTMENT OF PEDAGOGY.**

THE FIRST SHALL BE LAST AND THE LAST SHALL BE FIRST.

MY DEAR MR. BELL :—I see in your last issue the following :

" Miss Palmer objects to Prof. Tompkins's idea of presenting the theme before the embodiment. The immature mind of the pupil can not act so. The theme only gradually breaks upon him through study of the environment."

I wish to second this objection and add that not only the immature mind, but the mature mind can not act so. The theme must be made out by a careful and detailed study of the language and the imagery. There is no other order of approach than language, embodiment, theme. After the theme is arrived at then the embodiment and the language are studied in light of the theme.

It is the old question of the logical and the chronological movements. One sees a strange something in the distance ; approaching more closely he finds something of definite outline and color. Then definite parts begin to appear—seat, tongue, wheels, etc. On close inspection the working point of the machine is seen in the cutting bar and it is pronounced a mower. Its theme is now ascertained ; and with it the point from which the inventor moved in the construction of the machine. Now the thinker must reconstruct the machine and study its parts in detail as determined by the creative center in the scissors-like cutting of a stalk of grass.



Thus the study of a literary selection is a constant back-and-forth movement, but the approach must be made through the language and the embodiment. The pupil may be asked, however, as the first direction, to find the theme, knowing that he must do so through the proper means. Since there is only one way in which it is possible for him to do this he needs no warning against finding the theme first. So in a sense the theme may be the first sought for ; but sought for through the language and the embodiment. When one writes up his conclusions in a logical and critical way he must put the elements in the reverse order of theme, embodiment, language, *i. e.* in the order of the writer's construction. This is the only order in which the embodiment and the language can be explained and estimated as to their literary qualities.

But the theme can be arrived at only by generalizing all the evidence furnished by the text of the literary selection ; and if starting with the theme were not impossible it might be worth while to enter our protest against such procedure. Until the school master's rod is turned into a rod of divination the teacher must lead his pupils in the legitimate ways of finding out things.

More than one prominent teacher in Indiana has entered his well-meant, but useless, protest against the practice of setting up the theme first and then bolstering it up by whatever straws of evidence can be found in the text afterwards. Is it possible that these objectors are trying to practice what they object to, and accordingly set up their conclusions before all the evidence from the text was in? But I am sure that we will all agree with Miss Palmer in the order of study which she suggests ; and that any one who climbs into the sheepfold by any other way is a thief and and a robber, and ought to be shot on the spot.—*Arnold Tompkins.*

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#### MY PEDAGOGICAL CREED. .

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You ask me to write my pedagogical creed. I do not know that it differs much from the general belief of the average superintendent of schools. However, there are some things which I do firmly believe in reference to the philosophy of education ; so here I pen them.

I believe that the true basis for all methods of procedure in education is a comprehensive knowledge of man,—as child, youth,

and adult ; as individual and as a member of society ; as a being with a history and a destiny. No abstract psychology, nor any mere child study, will lay a basis sufficiently broad, though both of them are included in a proper knowledge of man. Even the knowledge of man as a person, without regard to social and rational characteristics, will not suffice ; all phases of the human being must receive consideration.

Having found man's natural characteristics, and having discovered his possible development, we are in condition to determine our ideals of character and set up our ends of education. This concludes our first line of investigation and gives us our primary set of beliefs.

I believe that the next most necessary theme for investigation by the student of education is the nature of the various ideas which constitute the different branches of learning, and which must constitute the means of development of the human being who by appropriate activities learns them. The teacher needs to know, at least in a general way, the precise use which each branch of learning is best adapted to serve in the proper education of the young.

Following the studies here indicated I believe it is profitable to study methods, *i. e.*, the rationale of the steps by which the human being under guidance appropriates and assimilates these branches of learning so as to secure his best, completest and most harmonious development.

In a similar way it is necessary to study what lines of conduct must be taught—*i. e.*, what discipline must be enforced, to the end of the highest development of character. I believe that along the lines here so imperfectly sketched, a theory of education may be discovered which will stand the tests required of a science ; and which will furnish the necessary rules for the guidance of teachers in the proper prosecution of their work.

I believe that some people are born with so much tact and grace that they teach well by instinct ; and that some of the best work done in primary schools is done by such people. But I have noticed that such people after a little experience, unless they set themselves seriously to work to learn the science of education ; become formal and artificial and lifeless in their teaching. So that I firmly believe that the only safe way for all teachers is to continue to study while they teach, and to seek through all the days of their teaching life for the better ways of teaching.

I believe that methods devised empirically and used formally are of little real worth ; but that methods wrought out by close observation, generous reading, and profound thinking, and applied under a high ideal and a deep feeling of responsibility are full of life and worth.

But I believe further that even a good method, in order to accomplish its best work in the school-room, must be wrought out by a man or a woman of high ideals of character and achievement. The teacher must believe in a theory of education which ennobles those in whom it is realized. I believe that is the best education which teaches us how we—society—are all joined together as a whole, for better for worse, for richer or poorer, in sickness and in health ; that when one member suffereth the others suffer likewise by a humanitarian sympathy ; that the criminal is one who finds himself in a state of maladjustment to the social whole ; fighting the hopeless fight against ethically organized society.

I believe we should teach the child to spell correctly, to read readily, to write legibly, and to calculate accurately. I believe in teaching the child the dignity of labor through a well arranged course of manual training. But these are the mere beginnings of education ; and by confining ourselves to these we are denying to our children their divine birthright—we are really denying them as yet the rights guaranteed them by the Declaration of Independence, the right to life—which is not mere existence,—to liberty—which is not mere freedom from physical bondage,—to the pursuit of happiness,—which does not consist chiefly in the getting of money or the gratifying of the animal propensities.

I believe in preparing the child by a very practical drill in the elements of an education to earn an honest living ; but I believe also in teaching him to recognize what is honest and pure and sweet and wholesome in life. I believe in teaching him that work is honorable—that drudgery may even be divine, if inspired and controlled by sound principle. Indeed, to live up to a high standard of life in a civilization still holding many of the crudities and evils of savage life requires that each of us shall daily do many things which in themselves are not only not pleasurable but are positively distasteful.

I believe in giving the young ideals of life and character and human worth and dignity, which will enable them to stand firm under all tribulation and drudge till the glorious end be achieved.

In and of itself much of our daily work is necessarily drudgery, while much of it requires that we bear large responsibilities, endure petty annoyances, and do disagreeable things. It is impossible that we shall feel any real interest in these things by reason of any gratification of any power of ours or by any tribute of theirs. There is therefore no motive to do these things unless one can be found elsewhere, but so related to these acts as to constitute for the time being a valid vicarious interest.

This a true ideal of the joyful service we can do. The end not only justifies the means but glorifies it as well. The continued contemplation of the ideal conditions to be achieved by work for the service of the loved ones gives a pleasure akin to realization, gliding at last into the glory of actual achievement. Happy is he in life who can so live and think and feel that the effulgent glory of his ideal life if thrown backward till it lights up all the pathway of his actual life. His ideal becomes the magnetic pole of his life and conduct. He will work and drudge ten hours per day if need be that he may found his ideal family life and keep it sweet and pure under the shadow of his own vine and fig tree. If properly educated, he will march with steady step to the cannon's mouth at the call of his patriotic ideal, counting life and limbs as mere incidents in the series of movements by which civil and religious liberty are established. He will counsel together with his neighbors, foregoing his personal preferences, in order that the social whole may be unbroken. His interests are so set in the best things that he cannot unbend to the mean or the low; and the high sense of gratification coming from the realization within himself of a high grade of manhood compensates for laborious effort and frequent disappointments in external plans and purposes.

The end and aim of modern education requires that one become able to think clearly, to aspire nobly, to drudge cheerfully, to sympathize broadly, to decide righteously, and to perform ably; in short to be a good citizen.—*L. H. Jones, Cleveland, Ohio., New York School Journal.*

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A man's ingress into the world is naked and bare,  
His progress through the world is trouble and care;  
And lastly, his egress out of the world is nobody knows where.  
If we do well here, we shall do well there;  
I can tell you no more if I preach a whole year. —*John Edwin.*

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**CHILD-STUDY DEPARTMENT.**

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**INDIVIDUAL STUDY.**

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A is a boy of dark complexion, healthy, 14 years of age and of about the average size, though hardly mature enough for the birth of physical manhood. He is said to be backward in his studies, for he is still laboring in the fifth grade. His attitude toward much of his work seems to be that of indifference. Few teachers that have never looked for him outside of the walls of the school room have ever felt attracted toward him. Yet very slight inquiry reveals some very interesting and promising features. He has a passion for physical science, especially for mechanics and electricity. One corner of a room at home is filled with appliances of his own invention and construction. The house is wired for electric bells; a motor has been fashioned; a furnace and numberless other contrivances have been made, all by his own unaided effort. Not much can be said of the boy's ability in his reading class in comparison with his fellow students, yet he has read intelligently difficult articles and books upon electricity. All of his interest in these subjects seems to culminate in some constructive and practical outcome. He undertakes mechanical tasks with skill. His next best interest is in human affairs. Those lines of work appeal to him most strongly in which physical phenomena or human interests (history—industry) are involved.

Sooner or later, however, the teacher's experience with him reveals another and less attractive feature. It appears that he is morally weak. This becomes first apparent in the fits of passionate anger that often result in serious injury to his smaller companions. His will seems to have been cultivated but little in strong lines of moral control. Sooner or later it appears that his school work is not always honest, and that he fears rather than respects authority. One is encouraged again to note that he appreciates a friend, especially one who is able to remember his strength while rebuking his weaknesses. But, alas! the weak will does not prevent his abusing the confidence of his friend.

Such are the conditions which appear upon a moderate study of the case. They by no means constitute a finished study, but rather suggest a variety of problems for further investigation. At this stage the study, from the teacher's view-point, is but

fairly opened. Such questions as these now present themselves : In how far are some of these moral weaknesses due to the temptations arising from a supposedly humiliating, though necessary, association in school with younger and smaller children ? If these social comparisons are to blame; in how far does the school atmosphere foster such feelings of social humiliation on the part of the child ? Or does some other, as yet unknown, sentiment enter into and modify the activity of the will ? Can the boy's strong and desirable interests be utilized as the points of contact and departure for other and necessary interests ? It is vain to insist that the boy belongs in a manual training school. He still needs much which only the public school can supply. Yet, in its more conventional and rigid constitution, the common school curriculum too often fails to reach and utilize these strong, though individual, points of contact. Again, are the forces of the home, and of the environment outside of either home or school, working in harmony with the latter ? What are these forces ? In how far do they supply nourishment for right or wrong motives of action in this case ? In many similar cases certain phenomena may point to the dependence of certain wrong actions upon apparent imperfect physical conditions, though this possibility is not clearly suggested by the above case. In any event, it is well to seek to know as much as possible concerning the child's physical condition. These and many other questions suggest themselves at once and invite to a further study of the case.

The study to which such individuals invite us, however, has its universal aspects. Here is a boy, very backward in many of the usual school activities, yet possessed of certain strong and valuable interests, weak, if not cowardly, in many of the features that belong to the moral worth of other children of his age, at times given to fits of anger. Without a study of his peculiar needs and capacities the average school can never touch him ; without a study of his motives and their sources, and, failing to seize and utilize his strongest interests and powers, education must remain hopelessly helpless in the presence of his passions and moral defects. In a few months the oncoming of the age of puberty, with its accompaniment of new experiences, thoughts, reflections, will complicate the problem greatly, if educational forces cannot combine to secure the safeguards of wholesome environment, wholesome motives, and wholesome, interesting and

well adapted employment. Yet the case appears by no means hopeless to the few who have interested themselves in its study. It stands as a type of many boys with whom the public school has to deal, yet whom it too often fails to reach. Many boys leave school before the grades are completed because they find themselves, so far as school is concerned, in the intellectual condition described above. The writer has known many such cases and almost every experienced teacher can recall a number of instances that reproduced some or many of its salient features. The same moral stamp may not always be present, but the intellectual attitude is common.

The above case (which has been drawn faithfully from life, with such changes and elisions, often of important facts, as publicity demands) already illustrates, in a measure, the great need of studying the persistent motives that prompt the individual to certain fixed manifestations of will, instead of proceeding at once to treat the case merely in the light of certain overt acts. The common ethical consciousness of mankind has long recognized that the test of moral worth lies in the thought back of the deed. We need to go one step beyond even this and to often search for the sources out of which the motives of childhood and youth grow and then watch their growth into the powers that dominate action for good or for bad. If we do this we shall be far less prone to misjudge the moral immaturity of childhood. Should we not, in fact, perhaps even in the above described example, regard evidences of moral weaknesses rather as "moral immaturity," than as "immorality?"—*C. C. Van Liew in the Public School Journal.*

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### THE METHOD OF SUGGESTION.

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Stanley Hall says that nine-tenths of all our life is probably imitation.

It is often remarked by teachers that the shortness of the school day and the fact that a class often remains with a teacher but a single year makes it impossible for a teacher to have any influence with his class outside of formal teaching. More valuable and true are the words of the educator who says—"If a teacher have a mind and heart large enough, his life becomes a tremendous suggestion every hour that he is in contact with his pupils."

This subject of suggestion and imitation has been receiving much attention during the last eight or ten years and much has been written about it in medicine, psychology, sociology and pedagogy. The phenomena of hypnotism and mesmerism are now explained as phases of suggestion and imitation. Religious fervors, trances and witchcraft are phases of the same thing.

Suggestion is the formation of a clear image in the mind. Imitation is the motor expression of the image formed by suggestion.

One may suggest by a word, look or the slightest action. The power of suggestion when used by an intelligent teacher conscious of this power and its influence on her pupils, becomes a great factor in successful teaching. It is used, of course, by every teacher, consciously or unconsciously to a greater or less degree. It is, in fact, used by every human being who comes in contact with any other human being.

The manner of teaching often suggests more than words. If a teacher acts as if she expects good order in the school-room and good, honest work from each pupil, and has a decided manner about it, the chances are that she will have what she expects.

Lack of interest in a subject on the part of the teacher invariably causes the pupils to dislike the same subject. A sudden change to an attitude of interest on the part of the teacher is followed by a similar change on the part of the pupils.

The dislike of so many children for grammar is accounted for in this way. It is practically useless for any one to try to teach a subject he dislikes. Dislike of a subject is an infallible indication of inefficiency. A thorough study and mastery is always accompanied by an interest in and a liking for the subject.

A beginning class in algebra asked their teacher what the use of algebra was, and received the reply that it was of no use but it was in the course and must be taught. As a result, the class took no interest in the work; the recitation hour became a period of torture to both teacher and pupils. The teacher blamed the pupils.

Mr. Small, at Clark University, has examined 244 cases in which the attitude of the teacher has meant much to the pupil. In these, grammar is mentioned forty-two times; arithmetic, thirty-three; geography, thirty-two; history, twenty-eight; algebra, twenty-two.



Among the reasons for dislike, lack of interest on the part of the teacher is mentioned seventy-two times ; poor method, fifteen ; personal dislike of pupil, nine ; lack of enthusiasm, four ; incompetency, three ; sarcasm, one.

The change of character and purpose in boys and girls through careful suggestions on the part of some teacher is no less interesting. Any one can recall from his own experience many instances such as these :

One boy said, " Every one seemed to think I was a wild boy. Two Sunday-School teachers determined to believe I was not wholly bad. I saw what they thought and made up my mind not to disappoint them."

A boy told his teacher a lie. He confessed it to another of his teachers saying, " I wouldn't tell you a lie about it because you trust me, but it does not make any difference what I tell her. She doesn't care. She never believes a word I say."

John was idle and disturbing in school. His teacher found he was interested in birds and studied birds with him. At the end of the year, he was as helpful as any of the other pupils.

A high school girl says " Mr. P— treats me as though I were a lady and I wish to be what he thinks I am, but Mr. H— acts as though he expected me to be rude in his room and I act my worst there."

Grace says, " Because I was large of my age and naturally boisterous and awkward, I was always in trouble with my teachers. Once I went into the room of a new teacher with the fixed determination of giving no trouble during the term. I had not been in the room an hour until she said : ' I know you of old. You're plotting mischief. We will have none of that in here.' My good intentions gave way to a resolve to make her life miserable and I did."

One boy was completely changed by a frank apology from his teacher who was in the wrong.

To be able to make these potent suggestions, the teacher must understand the nature and needs of his pupils as individuals. Methods and general principles give him little assistance. The only principle applicable to all is " Children are all alike only in being different." He must be broad-minded, full of enthusiasm for his work and sympathy for the children. He must have a firm belief in the possibilities for good which exist in every child, and,

above all, he must have perfect control of himself. He must help the child to find for himself that the best is the only thing to be desired, and that "he fails, and he alone, who has not striven."

Any one can find mistakes in a child's work, and no one is so painfully conscious of them as the child himself. The genius of the teacher is exerted, not in finding the imperfections, but in seeing some good in the work of each child, and by encouragements and suggestions working up from what little good there is instead of harping constantly on what is poor.

The method of suggestion requires, perhaps, a better knowledge of childhood, a clearer perception of the relation of things, and better judgment than any other. It does not despise drill or formal work but it believes that much of the time now spent in useless details might be spent in arousing the deepest and most thoughtful interest of pupils in their work.

Suggestion tries to produce strength, balance and independence in the pupils. It does not become flattery when used by an honest teacher. It helps to make the teacher unnecessary to the pupil and to make the pupil master of himself.

An effort has been made to analyze the teacher's moral influence upon pupils. It has been found that the manner, instead of religious fervor, influences most the precepts traceable to the teacher. It is not what a teacher *does* but what he *is*. If his spirit is great and free, his manner and work will take care of themselves. If his soul is cramped and his heart hardened, no amount of study of method or knowledge of the R's can fit him for a teacher. The teacher who inspires his pupils with a love of truth for truth's sake does not live in vain. Some one has well said, "It is not what a child knows, when he leaves school, but what he loves that is important."

It is in this line of spiritual education that the method of suggestion is most potent. It is interesting to notice that the period of adolescence is the period of greatest susceptibility to this method, also, that in perverse children, quickness of sympathy and susceptibility to suggestion are lacking.—*M. S.*

Indianapolis.

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NO MAN or woman of the humblest sort can really be strong, pure and good without the world being the better for it, without somebody being helped and comforted by the very existence of his goodness.—*Phillips Brooks.*

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## LEND A HAND.

(This department is conducted by Mrs. E. E. Olcott.)

*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

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### A PHASE OF GEOGRAPHY.

Recently, there appeared in a prominent daily paper a parent's comment on the present tendency in teaching geography. The father asked his young hopeful to locate New Orleans.

"I don't know just where it is, papa," the boy replied, "but I can tell you lots about ocean currents."

"I do not want to know about the ocean, tell me where Louisville is and what river it is on," continued the father.

"I don't know," repeated the son, "but I can tell you about river systems and tributaries, and mountain chains and coast lines and—lots of things."

At the close of the oral examination the father intimated that it was doubtful whether the boy could name the capital of the United States, and that this latter day student of geography was quite likely to locate Chicago on the Pacific coast and make San Francisco an inland city. His final comment was: "I'll be blessed if the boy knew *anything*."

The father's sweeping criticism was unjust. The boy knew much that was well worth knowing, and knew it well. He was far better equipped with geographical knowledge than the boy of a generation ago who could "sing all the capitals," and could locate cities, rivers and mountains with parrot like precision but knew nothing of the physical phase of geography.

Still, the question arises, What should the grammar school pupil know in geography? Is it unreasonable to expect him to be able to locate the most important cities and rivers in the United States, and to name the states and territories, and some general facts as to their location, etc? And since electricity and rapid transit are every day "making the world smaller" by bringing the nations into closer communication, is it too much to ask that pupils know something of the large cities of the world? Should they not have a definite, if limited, knowledge of countries, islands, and the various bodies of water that are historically, commercially or politically important?

We have been so afraid that pupils would think of a dot or a wavy line on a map when asked about a city or river that we have failed to realize the value of definiteness. If, for instance, Constantinople is asked for, a *definite* thought of a dot in a certain place on a map is better than a hazy impression of houses and people and a vague "I don't know just where it is, but I know the occupations of people in cities, and why some great cities—as Chicago—are so located."

Of course the aim has been to enable the pupil to have the impression of a city and the location of the particular one both in his mind, but perhaps we have neglected the latter. A good plan in reaching the desired end is to begin early in locating special places on the map. Suppose that the class is studying the map of the United States, have them turn to the map of Asia and find Bombay. Tell them of the terrible plague that rages there, and of the tower of Silence, on the top of which people of a certain religious belief lay the bodies of their dead and leave them exposed for vultures to devour. Tell them of the dreadful famine in India and that wheat in our own state sells higher because of the starving people in that far-off land. They will remember it and be more likely to know "where it is" because they have seen the name on the map.

No matter what map the class may be studying, why should they not turn to Cuba and point out Havana and Santa Clara? Or locate Behring sea and the Pribylof islands, and hear the substance of Dr. David Starr Jordan's recent report as to the probable fate of the seals.

Why should they not run the finger along the eastern boundary of Alaska and be told that the line is just now a matter of dispute?

In the Primary Department of the September ('96) number of the SCHOOL JOURNAL is a letter from a British fourth grade boy, a passage from which is as follows: "I will now have a little talk about that Venezuelan affair. If we were in trouble, or, rather, necessity, you as a nation would be the first we would apply to for advice. But we brook no interference from any one. We did not ask your advice about Venezuela, \* \* \* and I hope that the millions you lost at the mere rumor of war with us will be a lesson to you, and you have noticed our losses were trivial."

It would be interesting to test the fourth and fifth grade pupils in our various schools to learn what views, if any, they have on the Venezuela question.

Why not have pupils find the isthmus of Tehuantepec, and trace the proposed Nicaragua canal, and locate Hawaii, and be given such information that in a non-partisan way they may talk of the pros and cons of building the canal and of the interest of the United States in Hawaii?

If, by some such plan, the children are "brought up" to be interested in foreign and domestic affairs they will insensibly imbibe the loyal spirit shown by the British boy, and say: "We (the people of the United States) think so and so," and will become intelligently patriotic citizens.

This phase of geography—a live interest in commercial and political geographical topics—should begin early and never be dropped.

An up-to-date geography should stand with the dictionary, and the habit of consulting both be deeply implanted.

I take the following from the review questions in the *Week's Current*. Can your eighth grade, can your high school pupils answer them?

1. What is the Alaskan boundary disputed, and why is it receiving special attention?
2. Where are the Phillipine Islands? What is the trouble there, and why does it interest us?
3. What and where is Crete? What can you tell about it?

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#### DESK WORK—HOMONYMS.

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Webster defines homonym thus: "A word having the same sound as another but differing from it in meaning; as the noun bear and the verb bear."

Some authors enlarge the definition, making homonyms words that sound alike but differ in meaning and in *spelling*, as bear and bare.

Teachers know to their sorrow the woe that such words bring to spelling lessons, and the havoc wrought by them in written language work. They should receive special attention—the use, spelling and definition each receiving its share of practice work. For the convenience of the teacher a long list of homonyms is given.

course, coarse	deer, dear	brake, break
miner, minor	wears, wares	steak, stake
ate, eight	hart, heart	slay, sleigh
see, sea	hall, haul	all, awl
bow, beau	right, write	base, bass
nun, none	waste, waist	seller, cellar
bred, bread	way, weigh	eye, I
red, read	wait, weight	the, thee
led, lead	quire, choir	ail, ale
son, sun	heal, heel	hare, hair
one, won	made, maid	week, weak
pail, pale	peace, piece	him, hymn
heard, herd	ball, bawl	lane, lain
pane, pain	bald, bawled	some, sum
there, their	ought, aught	toad, toed
fir, fur	flour, flower	pries, prize
sore, soar	forth, fourth	rap, wrap
inn, in	fore, four	hour, our
blue, blew	hole, whole	serge, surge
be, bee	wood, would	air, heir
seas, sieze, sees		dying, dyeing
pear, pare, pair		bury, berry
aisle, isle, I'll		dew, due
rain, reign, rein		earn, urn
seen, scene, seine		flue, flew
boll, bowl, bole		gait, gate
by, bye, buy		peal, peel
oar, o'er, ore		male, mail
road, rode, rowed		mane, main
sent, cent, scent		need, knead

They may be utilized in desk work as follows :

# I.

Arrange the words on cards or blackboard as follows, the corresponding homonym to be supplied :

1.		2.	
peace,	—	so,	—, —
groan,	—	to,	—, —
gate,	—	cent,	—, —
need,	—	rode,	—, —
bury,	—	rain,	—, —

## II.

Fill blanks in sentences with certain homonyms, and let the pupils make language cards as detailed in the Lend a Hand Department in November '96 JOURNAL. To illustrate :

. fare, fare

The — little girl paid her —.

Isn't the — very high?

Yes, it isn't — to make her pay so much.

## III.

Homonyms may be defined and used in original sentences.

Definitions are treacherous even if the precaution is taken to have the word woven into a sentence.

It is on record that a pupil gave a definition as follows :

Concede, to yield. The tree concedes much fruit.

Another is reported as giving anonymous, without a name. Our baby is anonymous.

So, though it is well to have some defining done, the words should be chosen carefully, and considerable latitude allowed the pupils.

The direction might be : Define (or illustrate in a sentence the use of) the following words : stair, stare, sum, some.

Completed work :

Stair, a series of steps.

Stare, to gaze steadily.

Sum, Adding numbers gives their sum.

Some, Some pupils can define this word and some of us have to use it in a sentence.

## IV.

There is an old-time pencil game which has been played by famous literary people. It consists in connecting in thought and weaving into "verse" unrelated words. I regret that I have not at hand the example of such rhyming, the work of an English author, which I once read, but the following will illustrate : The words were *clod* and *moon*, and one participant in the game wrote :

In haste, I had scarce run a rod,  
Ere I stepped on a treacherous *clod*;  
And the light of the *moon*  
Revealed me full soon,  
Reclining at length on the sod.

This game very greatly simplified may be used as desk-work in this form ; Connect in thought the homonyms given by weaving them in one or more sentences.

Pear, pair, pare. I will pare this pear for a pair of canaries and their nestlings.

So, sew, sow. John will sow the wheat. Mary will sew the sacks to hold it. So both of them will receive part of the money it sells for.

It may be made still more difficult by connecting two sets of homonyms, thus : bear, bare, weight, wait. My brother called, "There's a *bear* passing by ! Come on !" I couldn't go out in the hot sun with my head *bare*, so I said, " *Wait* till I find my hat." But he ran on, so I held an umbrella over my head and ran too. I don't know the bear's *weight* but it was immense.

### SOME QUESTIONS FOR EYES THAT SEE.

When does the maple tree bloom ?

What color are its blossoms ?

Which blooms earliest, the peach or apple tree ?

What color are their blossoms ?

What is the color of the pear tree's blossoms ?

Of the blossoms of plum and cherry trees ?

Upon which do the blossoms appear before the leaves ?

Which are in leaf before they bloom ?

### BUSY-WORK DEVICE.

Give pupils each a small box and a foot-rule, let them measure the box and write down the dimensions as follows :

Length of one side =	Area of both ends =
Breadth of side =	Length of top =
Area of one side =	Breadth of top =
Area of both sides =	Area of top =
Length of end =	Area of bottom =
Breadth of end =	Area of top and bottom =
Area of one end =	Area of entire surface =

—*The Teacher's World.*

TRUST to nothing but God and hard work. Inscribe on your banner, "Luck is a fool, pluck is a hero."



**PRIMARY DEPARTMENT.**

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the  
Anderson Schools.*

**PRIMARY HISTORY, MARCH 4, 1897.**

The two great questions for the primary teacher in history are, "What shall I teach" and "how shall I teach it," and the first to be determined is the first stated. What of history shall be taught to little children? In all history work from the beginning through to the end I believe the essential nature of history should always be kept in mind, just as much if the little lesson is in the First Grade as if it is in the Eighth or in the High School. Probably it cannot be made so prominent, but if the teacher is clearly conscious of it, it will help to determine the whole trend of her work.

Events are but the external objective facts. Jamestown was settled in 1607, Plymouth Rock in 1620, Navigation Acts were passed in 1651, the Revolutionary War was closed in 1783, the Missouri Compromise was effected in 1820, the Civil War was opened in 1861, the Central Pacific Railroad was completed in 1869, and the Panama Canal affair has been before us from 1881 to the present time. The subject of history is full to overflowing with these events, and if there was nothing back of them history would indeed be made up of material seemingly unrelated and isolated.

But each of these events in itself is a small thing compared with the whole undertone of thought and feeling of which it is the expression. Back of the external facts of the settlements at Jamestown and Plymouth Rock was a spirit of uneasiness, unrest and dissatisfaction. Back of the Navigation Acts were the irritation felt by Great Britain and the agricultural and manufacturing growth of the colonies. Back of the union of the four small, weak colonies in 1643 for protection against the Indians was the very idea that afterward gave to the world a new nation and developed into a strong centralized form of government. Each event is but the outward manifestation or expression of dissatisfaction with some existing condition and the struggle or conflict that is being made to reach something felt and believed to be better. The event is but a symbol, a sign of some hidden meaning; it is a form that must be translated into thought.

In the second place, all historical work has its truly educational function when it touches in some way the life of the child, when there is some phase of it in which the child sees clearly he has a part. Once the pupil can see this, the historical work becomes to him a real thing. In the selection of the material to be used in the primary grade this fact must be kept clearly in mind, as it is much more difficult for children to appreciate this fact than for larger pupils. There is probably no other one thing in which the child takes a greater interest in the world about him than in the celebration of noted days. Every child has a personal interest in Thanksgiving, Christmas, New Year's Day, Lincoln's, Washington's and Longfellow's birthdays, St. Valentine's Day, Easter, March 4th, Decoration Day and July 4th. And in many sections or in certain classes there comes the observation of Emancipation Day, St. Patrick's Day and Good Friday. The observing teacher is quick to see that these are events through which the child's life may be touched by historical material. It is only once in four years that the most can be made out of March 4th, and that is always at the time of our presidential inauguration.

Let us take this event to show what may be done in adapting it to six, seven, or eight year old children.

#### CITY OF WASHINGTON AND INAUGURATION.

When George Washington was elected first president of the United States everybody wondered how he would dress, and just how he would do when it came time for him to be inaugurated, that is, when he should go to the Capital and make the promise to do everything in his power to uphold the Constitution or law which the people had just a short time before decided they wished to have for their new country. I am sure you would have been interested indeed could you have seen George Washington as he appeared on that first inauguration day. He was dressed in a fine new suit of black velvet, the same kind of velvet that little boys' pants and coats are often made of. His pantaloons came only to his knees and then he had on long, black silk stockings and black slippers with silver buckles. The sword which he had used through the whole long, weary war was not quite new enough for this occasion, so a fine one was gotten on purpose for inauguration day. And another thing which he bought, and at which you would be very much surprised was a wig which had curls that

came down almost to his shoulders, and which he powdered until it was almost white, and over this he wore a fine new three-cornered hat. When he went to the building and laid his hand on the open Bible and promised before the few people that were there that he would do all in his power to make the government all that the people hoped it might become, he was so sincere in what he did and the ceremony was so impressive that everybody forgot how fine their first president looked. But George Washington was inaugurated in New York City and not in the present capital of the United States. There was no such city as Washington then, but while he was president the government made arrangements to buy a little piece of land on the Potomac river, and to lay out a city, and to build the great building that was to be the capitol of the United States, and to name it after the first president.

If we were to go to Washington on the Knickerbocker train it would take us a whole day and a whole night riding just as fast as that train usually goes before we could reach the place. We would not stop anywhere to stay all night but would sleep on the train. We would hardly stop at any place long enough to eat a meal, and even riding in that way, it would take us a little over one whole day and one whole night to reach the city. Now, if we were going that far directly south we would find it would be very much warmer than here, and if we were to go that far directly north we would find it very much colder than here; but in going to Washington we go both east and south, but a great deal further east than south, so we find that the city of Washington is but little warmer than our own little city at home.

It was just ninety-seven years ago the fourth of this March that the first president was inaugurated in the new city of Washington, and that president was Thomas Jefferson. He was a man who believed that each person is just as good as every other person; who did not think it right to have very much ceremony in connection with the inauguration. And so that morning he went out and saddled his own horse, and wore his every day clothes and old hat and rode down Pennsylvania Avenue to the Capitol with only one or two friends with him. It looked very little indeed like a city at that time, for Pennsylvania Avenue was only a dirt road and the alder bushes had been cut down on either side and were lying in heaps ready to be burned. There were almost

no houses between the White House and the Capitol. What is to-day one of the finest avenues in the world (Pennsylvania Avenue,) was then (ninety-seven years ago) a long dirt road running through almost a wilderness of weeds and bushes from the White House with a little clump of dwellings around it at one end of the street, to the Capitol building with a few houses at the other end of the street. But the Capitol building which Thomas Jefferson entered that morning as he jumped off his horse and tied him to a hitching post was not the same magnificent building that Mr. McKinley will enter to-day. The greater part of that first building was burned a long time ago, but has since been rebuilt and has had certain parts added to it.

In this great capitol building are two bodies of men who have been sent there to make the laws for this country. One of these is called the House and the other the Senate. Mr. Jefferson went into the room in which the Senate was and walking up to a desk in the front, a Bible was handed to him, open, and he did just as Washington had done before him, laid his hand upon it and promised to do everything in his power to make this country a prosperous and good nation and in every way to carry out the Constitution. He then leaned over and kissed the Bible and was declared the president of the United States. When the inauguration was over, Mr. Jefferson told the few people that were there in the room what he hoped to do, then he and the few of his friends left the Capitol, took their horses from the hitching posts, and rode back Pennsylvania Avenue to the White House.

Mr. Jefferson caused to be planted a row of Lombardy poplars on either side of Pennsylvania avenue. Several years later than this a man by the name of Andrew Jackson was elected president, and on the morning of that particular fourth of March when Andrew Jackson rode down Pennsylvania Avenue to the Capitol, things looked very different indeed from what they did when Thomas Jefferson had gone. Those poplars had grown to be fine trees and instead of a dirt road the streets were paved with stones. While Jefferson had only a few friends to accompany him, there were hundreds and hundreds of people that went in the procession with Jackson. The people thought that Mr. Jackson would turn out of office nearly all the people who had been holding office under the preceding president, and if they could go there with a number of their friends and meet the president and join in the

procession they thought that the new president might probably appoint them to some of the positions. And so it came from that day to this that the inauguration of the president has been attended by great crowds of people. If we could have seen Andrew Jackson that morning we should have found him dressed in a suit of fine black broadcloth, which would not look so very different from your father's own clothes of to-day, but would look very different indeed from the suit which George Washington wore. He rode a fine white horse that pranced nearly from one side of the street to the other.

Several years passed and a man whose home was in Indiana was elected president. His name was William Henry Harrison. The crowds of people that were in Washington on that day were still greater than they had been when Jackson was inaugurated. Those great Lombardy poplars that Mr. Jefferson had had planted and which had grown into fine trees when Mr. Jackson had ridden down to the Capitol to be inaugurated had all been cut down and carried away, and even the stones of the street had been taken out, and a man by the name of Macadam had been there and had shown them how to make a street out of crushed stone and cement that was far better than a street made of the old rough stones whihc they had had before. So at this particular time Pennsylvania Avenue was one of the finest streets in the country. Houses had been built on either side and Washington no longer looked like a wilderness. Mr. McKinley will ride over the same Macadamized street that William Henry Harrison, with a little log cabin in the procession, rode over fifty years ago.

After the time of William Henry Harrison the people living in the northern part of the United States and those living in the southern part became very bitter toward each other. The people of the south had slaves, that is, had colored boys and girls and colored men and women who worked for them, and all they gave them for their work was their food and clothes. They went even further than this, and said they had the right to buy and sell boys and girls just the same as your papa has a right to buy and sell a horse. The people of the north did not think this was right, and so it was found that when the president was elected that he was a man from the north, Abraham Lincoln, and it was this man who was the one to help guide the country through this deadly struggle.

On the fourth of March over thirty-five years ago, Abraham Lincoln went with his friends to be inaugurated president. There were a great many troops of soldiers, some who walked on either side of the president's carriage, others in front and still others behind. All these men carried guns that were loaded because they had heard that there were people who had planned to kill Mr. Lincoln that morning, and they were determined that he should reach the Capitol in safety. Among the thousands and thousands of people that were crowding Pennsylvania Avenue that morning there were many faces that looked anxious and hopeful for the country and wished the new president well; but there were many others that were dark and threatening. There were men and women around the edges of the crowd who muttered curses on Abraham Lincoln while he was at the Capitol, laying his hand on the Bible and also promising before all that assembled people that, God helping him, he would keep his country from being divided into two sections. I suppose you little people have all heard of Mr. Lincoln's later life, and know how only a few years later when he was a second time elected president he was shot and killed by one of these secret enemies.

The crowds that attended the inauguration of a president became so great that now only the very smallest handful of the people was able to see the president take the oath of office when it was done inside the Senate Chamber. So it came about that in order that most of the people might be able to see the inaugural ceremony, a platform has been built outside of the Capitol where all the people who have assembled in the square and on all the streets leading to this side of that side of the building are able to see the new president.

If we were able to be on the top of the Capitol building to-day and look down upon the sight, I wonder what we would see? In the first place, all the buildings and residences are decorated from the ground to the roof with flags and bunting. Washington, indeed, looks as if it was dressed for a festival, and Pennsylvania Avenue (fine old street that it has been for a long, long time) has built on either side for quite a distance raised platforms on which people may be seated and watch the procession. And there, leading out from the Senate Chamber, is an immense platform which has been built and on which almost more people can be seated than any little church in this town will hold.

This is the last day, the last forenoon that Mr. and Mrs. Cleveland and the little Cleveland children that we have heard about so many times will live in the White House, for it is now ten o'clock and the carriage is waiting for Mr. Cleveland. He comes out, enters the carriage and is driven to the hotel at which Mr. McKinley and his family are stopping. Mr. McKinley is ready to go to the Capitol and he goes quickly from the hotel and enters the carriage with Mr. Cleveland. They now start to the Capitol building and their carriage is followed by other carriages in which are Mrs. Cleveland and her friends and Mrs. McKinley and her friends, besides many others. When they reach the Capitol, Mr. Cleveland and Mr. McKinley will go into the president's room adjoining the Senate Chamber and wait here for further arrangements to be completed. Just as the clock strikes twelve, they go out on the platform that has been built and on which all the people are seated, and from which you can look down upon the thousands and thousands of people in the street. Here it is that a certain man brings forward the Bible, just as it was done that very first morning when George Washington became president. I think we can almost see Mr. McKinley to-day, his hand upon this open book, and promising before all the thousands of people that are assembled that he will do all in his power to uphold the Constitution of the United States and do everything that he can do, as he says, "to make the people prosperous and happy." Just at the instant that Mr. McKinley has kissed the Bible and is declared to be the new president of the United States, all the cannon that have been stationed out near the Capitol building and in different parts of the city at a certain signal are fired, all the flags are waved, and the people shout and wave their handkerchiefs. And now Mr. McKinley steps forward and reads just what he hopes to do. This is called his inaugural address.

When this is over he and Mr. Cleveland and other friends go back through the Capitol building and down to their carriages that are waiting, and now the procession starts to the White House. We notice in this procession that there are a very great many soldiers, and if we were to ask any one I am sure we would be told this, that the company of soldiers nearest the new president are the soldiers from the state that was first to say that she was in favor of the Constitution of the United States, and the

second body of soldiers are sent by the state that was the second in deciding that she wanted this Constitution, and so on through the great number of soldiers that are passing in the procession. They ride down Pennsylvania Avenue to the White House and there Mr. McKinley and Mr. Cleveland and their friends leave their carriages, and find that there is also a platform that has been put up and on which the president is to stand and watch all these soldiers as they pass in front.

It takes a long time for the procession to pass and as soon as it is over Mr. and Mrs. Cleveland and Mr. and Mrs. McKinley go into the White House and there Mr. and Mrs. Cleveland bid Mr. and Mrs. McKinley good by and then go to the hotel. The White House is now to be the home of Mr. and Mrs. McKinley for four years and Mr. and Mrs. Cleveland and their little girls will move to their new home in Princeton, New Jersey.

At this time a lesson on the Capitol building and White House would be interesting and helpful. With pupils a little larger a lesson may be given on some of the principal duties of the president and life in the White House with the growth that has come about in the complexity and variety of customs and duties. These help to emphasize the fact that each generation has a different life from the former, but all it has has grown out of it.

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#### A PRIMARY READING LESSON.

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It was just before Christmas and the children had been in school four months.

"I am trying to think of a good word for us to learn to-day," remarked the teacher, looking very serious, as if she had not thought until just that minute that she wished them to learn a word at all. "Oh, yes, let us take *birthday*. Now see how it looks on the board." She stepped to the board and wrote the word very carefully. She stepped back from the board, but the children looked intently at the written word.

In probably a minute she erased the word. "Who thinks he can write the word on the board?" Several hands were raised. "You may write the word, Frank." Frank wrote, but he left out the letter *h*. "Frank's word isn't quite right," remarked the teacher, erasing the misspelled word. "Now try it again, Frank. The rest of you may write it on your paper." Frank thought



very carefully, trying to recall the exact picture of the word. Suddenly the idea came and he hurriedly rewrote the word, and this time it was exactly right. The teacher walked down the aisles and very quickly saw exactly what each child had done. When one was wrong she turned his paper over and told him to look at Frank's word on the board.

"We want a good story with the word *birthday* to put on the board. Who is ready to tell me one?" Several hands were raised. "What is yours, Mary?" "I have a birthday." "Yes, that is true; but we want a story that will be interesting enough to be written on the board." Others gave stories but with a word or two of comment they were dismissed as too commonplace. At last one little girl said, "We celebrate Christ's birthday on Christmas." "Now, that is an excellent story, isn't it children?" But we have never seen the word *celebrate*. Let me put it on the board for you." She very quickly (but very carefully) wrote the word *celebrate* and then allowed the children to take a good look at the word. Two or three wrote it on the board just as was done with *birthday*.

Then the teacher wrote the sentence, "We celebrate Christ's birthday on Christmas." This was read by a few children and they wrote it on their papers. In nearly every case it was very clearly and well written in the vertical hand with no ruled lines except the base line.

When this was done several stories concerning Christmas were written on the board and occasionally a new word was put in. The new words were mastered and no account taken of their length. These children had in four months of school learned how to use their eyes well. Usual images of written words were so good that they could not only recognize words but could write them as well. And it was quite as clear that the children associated closely each written form with its appropriate idea.

This is one woman's successful way of teaching little people to read.

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"I EXPECT to pass this way but once; if, therefore, there be any kindness I can show, or any good thing I can do to my fellow human beings, let me do it now, let me not defer or neglect it, for I shall not pass this way again."

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## OFFICIAL DEPARTMENT.

DEAR SIR:—You favor of February 11, is at hand. In it I find the following:—"The Township Trustee of German township has a surplus of dog money of \$600, which he intends to transfer to the school fund. The town of Bremen is located within the said German township, but is incorporated, and paid about 25% of the dog money which the Township Trustee received and is included in the \$600. Now in case of the transfer of the money is the town School Board entitled to its pro rata? or would the same belong all to the township?"

ANSWER—The case of Taggart, Auditor, et. al. vs the State, ex. rel. Williams, in which it was decided that the surplus dog fund in the hands of a Township Trustee should be distributed among the school corporations in the township in proportion to the school population of each corporation at the time when such fund should be distributed, is a parallel case to yours. This was an action brought by the Treasurer of a School Board of the city of Indianapolis against the Auditor of Marion county to obtain a mandate requiring said Auditor to distribute the surplus dog funds which had, on the first Monday of March, 1891, been paid to the Treasurer of Marion county by the Trustees of the several townships of the said county: and requiring that the Auditor should issue to the Treasurer of the School Board a warrant for the portion of such surplus fund which should come to the city upon a distribution of the fund. The decision was given, as above, to the effect that the Township Trustee should distribute to all of the school corporations, including his own, on their pro rata share of the surplus dog fund in his hands in proportion to the school population in all corporations.

Yours very truly,

D. M. GREETING.

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## INFORMATION FOR TEACHERS.

DEAR SIR:—The questions in Guizot's History of Civilization for the February, March and April examinations, will be based on the *fourth, fifth and sixth* Township Institute Outlines respectively.

For the same examinations, the questions in the Science of Education will be as follows: February, McMurry's General Method; March, McMurry and DeGarmo; April, not confined to any particular text.

For the six examinations beginning with May, 1897, the questions in "General Culture" will be based on Guizot's History of Civilization, covering one of the Township Institute Outlines (1896-7) at each examination, beginning with the first.

For the same examinations the questions in *reading* will be based on Tompkins's "Literary Interpretations," covering one of the Institute Outlines at each examination.

The questions in the "Science of Education" for these examinations, will not be based on any particular text.

It is suggested that the County Superintendents urge all teachers to take the examination in the Teachers' Reading Circle books on the third Satur-

day in July. A passing grade in these subjects will exempt the applicant from examination in the "Science of Education" and "General Culture" for county license. Passing grades for four years exempt applicants from examination in these subjects for professional and life licenses.

These instructions apply to the primary examinations also.

Very truly,

F. A. COTTON,

*Clerk of State Board of Education.*

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#### TEACHER'S CONTRACT BINDING ON TRUSTEE.

DEAR MADAM:—Your favor of January 26 is before me. In it we find the following: "The Poneto school building burned this morning between one and four o'clock. We contracted to teach six months and have taught four. We have tried to persuade the trustee to furnish a hall so we can finish the school but he thinks it best to close the school for 'this year. Will the teachers have to forfeit wages for the remaining two months?"

Replying, will say that where a school is broken up because of failure of trustee to furnish another building, on the destruction of the school house by fire, the teacher may recover, under a contract, wages for the entire term. See section 4501, note 33 school law. Yours very truly,

D. M. GEETING.

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### EDITORIAL.

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#### NATIONAL SUPERINTENDENTS' ASSOCIATION.

The National Superintendents' Association was held in Indianapolis March 16, 17, 18, with C. B. Gilbert, superintendent of schools at Newark, N. J., presiding. It was one of the largest and one of the best meetings in the history of the Association. The subjects discussed were of general interest and were handled by some of the ablest men and women in the country. Universal principles and their application, rather than details and specific rules, were sought. The reception given the Association by the Indianapolis teachers was a very pleasant affair. It afforded an opportunity for members to get acquainted with one another and with the teachers and leading citizens of Indianapolis. The visitors bore uniform testimony to the excellence of the Association and to the cordiality of the Hoosier reception.

#### NOTES.

One of the striking features of the occasion was the address on "Music in Education," by Prof. Tomlin, of Chicago.

"The Province of the Supervisor" was ably treated by Lewis H. Jones, formerly superintendent of the Indianapolis schools.

W. H. Senour, of Franklin county, acquitted himself with credit in his conduct of The Round Table for county superintendents.

Nearly all the city superintendents of Indiana, and many county superintendents were present and did what they could to make the meeting a success.

N. C. Schaffer, Superintendent of Public Instruction of Pennsylvania, was elected president for next year, and Chattanooga was selected as the next place of meeting.

The Round Table on "Child Study," conducted by M. V. O'Shea, of the School of Pedagogy, Buffalo, was attended by nearly a thousand people and was full of interest.

A resolution was passed heartily endorsing the work of W. N. Hailmann, as superintendent of Indian schools, and urging his continuance in office by the incoming administration.

The Association brought together all the superintendents Indianapolis has ever had. They are A. C. Shortridge, George P. Brown, H. S. Tarbell, Lewis H. Jones and D. K. Goss, and they served in the order their names are given. Mr. Shortridge organized the schools in 1863.

Dr. J. M. Rice filled the largest room to overflowing in his Round Table on "The Three R's," but the meeting was not a success. The people were anxious to hear the doctor, and when he simply announced that he thought that certain parts of the arithmetic might be eliminated, and that the number of words that children should be taught to spell should be restricted and asked the audience to fix meets and bounds, there was a feeling of disappointment. The doctor was urged to give his own views, but did not do so, further than to say that he thought that the extent to which "The Three R's" should be taught should be agreed upon.

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#### "THE HISTORY OF LIBERTY."

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"The History of Liberty" is the title of one of the Young People's Reading Circle books for the current year; and strange to say, it has recently been discussed and condemned, as a Reading Circle book, by the House of the Indiana Legislature. The Roman Catholics condemn the book in strong terms because of the manner in which it treats religious questions. One legislator denounced it as a "tissue of lies," in so far as it deals with the Catholic church.

The author of this book is Charles Carlton Coffin, who is also the author of "The Building of a Nation," "The Boys of '76," "The Boys of '61," etc., and is counted one of the best writers, for boys and girls, in the country.

The writer has not read the book and so cannot express an opinion as to its merits, but this much can be said, and should be said, touching any history that has to do with churches. It is a well known fact that all the way down the ages religious strife has been at the bottom of many wars and has been the occasion of persecutions and oppressions, such as would not now be tolerated in any civilized community. The massacres now going on in Asia Minor grow out of religious prejudice and are not without many parallels in other parts of the world in times past. The Protestants have burnt

witches and martyrs and committed innumerable crimes in the name of religion. No one religious body has had a monopoly of religious intolerance. Now, it is easy to see that with this prejudice and even hatred that has existed and, in some parts of the world, still exists among different churches, it was impossible for them to see things in the same light. It is easy to see how every question, in which the church had any part, should be viewed from different standpoints. The Protestant in writing a history views things from a Protestant standpoint and relies on Protestant authorities; and the Catholic in writing a history would, as a matter of course, see things from his standpoint and rely on Catholic authorities.

The Union soldier can not write a history of the Civil War that the Confederate soldier will endorse.

All fair-minded people will agree that books that treat of these controverted questions should be fair to both sides. But the fact is that it is very difficult to find such books. In the first place no statement could be made in regard to many historical points that would be considered fair by both sides. In the next place, a writer belongs to one side or the other, and his education and training have been such that he could not be entirely fair to the other side if he should try.

The Reading Circle Board are much surprised at the criticism of this book. They selected it on account of the theme it treats and on the reputation of its author, without knowing that he had treated the religious part of the book in an objectionable way. They had no thought of giving offense to the numerous Roman Catholics who teach in our schools and patronize our schools.

The writer has not been asked to speak for the board, but feels warranted in saying that in the selection of the book no offense was intended, no attack on the Catholic Church was thought of, and that in the future a more careful examination will be made in the selection of books that deal with church questions.

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#### SCHOOL LEGISLATION.

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In last month's JOURNAL, it was stated that some important school legislation would probably take place at this session of the Legislature, but at this writing, within ten days of the close of the session, not a single educational bill has passed both houses and the probability is that none will pass.

The bill proposed by the legislative committee of the State Association, generally known as the Geeting Bill contains many valuable features and is heartily endorsed by a large majority of the educational men of the State. It has been opposed by the non-State college men, on the ground that it proposes to give to the State Board of Education enlarged powers in regard to licensing teachers, city and county superintendents, etc. They ask that the three college presidents now on the board shall be replaced by other men not connected with any college, State, or non-State. They insist that the non-State colleges help to educate the citizens of the State without cost to the State and should not be discriminated against. The friends of the bill insist that a State Board is not complete without college representation and

that the Governor is not likely to appoint as good men, on an average, as the present system provides.

They also deny that the college presidents have used their places on the State Board to further the interests of their institutions to the detriment of the non-State colleges.

The non-State college men also demand that the law that makes a diploma from the State Normal School equivalent to a State license, be repealed, and that normal school graduates be placed on the same footing with other college graduates. They offset the claim for the normal school that it makes a specialty of professional work, with the more extended courses and broader culture of the colleges.

The State Normal feature could probably be compromised by providing that all diplomas granted and to be granted in the next two years be not affected by the new law and that the life license feature of diplomas thereafter be limited to teaching the common branches.

But at present there seems no possibility of a compromise on the question as to the composition of the State Board.

The Library Bill, from which so much was expected, has been killed, principally, on the ground that it concentrated too much power in the State Board. This is a great misfortune.

Early in the session, several bills on compulsory education were introduced and there was a strong feeling that a compulsory law would be passed, but, up to date, no progress along this line has been made.

A bill to establish another State normal school in the eastern part of the State, by dividing the revenue that now goes to the present normal, has reached engrossment in the House and may pass, but it is not likely to pass the Senate. The friends of the bill claim that the present revenue is sufficient to run two schools if they were limited to strictly professional work.

The writer sincerely hopes that, if nothing more can be done, the township high school part of the Geeting Bill, which does not contemplate placing any more power in the hands of the State Board, and upon which all are practically agreed, may be formulated into a separate bill and passed.

Possibly, more may be done in the line of school legislation than is indicated above, but the prospects are not at all hopeful.

Because of the many things in the Geeting Bill that would undoubtedly advance the welfare of the schools, the JOURNAL regrets that the non-State college men did not simply introduce bills and work directly for the two changes in the law they wish made and allow each to stand upon its merits. From the JOURNAL'S point of view this would have been better, in the end, for both parties.

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REMINDER.—Have you received a "reminder" yet? If not, remit at once, and save the unpleasant sensation produced in both sending and receiving.

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IN REMITTING for the JOURNAL, do not send personal checks for small places, it costs from ten to fifteen cents to collect them.

## TRIBUTE TO THE TEACHING PROFESSION.

The Rev. F. E. Dewhurst, pastor of Plymouth church, in his sermon on the Sabbath following the late National Superintendents' Association, paid the following tribute to the teaching profession :

" We have had in this city, and assembled in this church, during the last week, a notable convention ; notable not only on account of the men and women who composed it, not only in the nature and range of subjects under discussion, but most of all, as it seemed to me, in the spirit and purpose pervading those discussions. And I want to say, as an expression of personal conviction, that the most hopeful and encouraging sign in our entire republic, at the present time, is the spirit and purpose which appear to be controlling our leading educators. There is much to dishearten and dismay the most hopeful and courageous in our present condition in this land, but I feel that one has a right to gather fresh hope and faith from the attitude to life which was indicated last week by the leading speakers on this floor. If our senators fail us we may turn with confidence to our schoolmasters.

" If salvation is to come to our republic, I am persuaded that it must come, in a great measure, from our common schools.

" Now, of course, one knows that there is pedantry and professionalism there and everywhere else, but the very first notes that were sounded here were notes from the Pauline trumpet, calling out the " more excellent way." When the schoolmasters begin to talk more about the child than the curriculum ; more about the soul than the system, one feels very sure that personality and sympathy can not perish under professionalism.

" An incident related by one speaker was very impressive, and not only impressive and instructive so far as his own thought was concerned, but in its bearing upon our thought to-day. ' I was in the university,' he said, ' in the day of Tischendorf, the renowned Biblical scholar ; I followed him to the grave ; I saw the flowers heaped upon his coffin, and the badges of honor which he had received from emperors and from learned societies were upon his breast. But in those days no one cared to hear Tischendorf lecture, for he dwelt continually upon his own attainments and his distinguished contributions to Biblical learning.' Ah ! how sad it all was ! how pathetic ! I could seem to hear these words of Paul come echoing down the centuries : " Though I know all mysteries and have all knowledge, but have not love, I am nothing." To lose the sympathetic contact with life, to forget for one moment what one's learning is for, to think of one's attainments and not of one's deepening accountability because of one's attainments,—how it empties life of its interest and glory ; how it makes it nothing. I could not help thinking, however, that if the conception of the teacher's profession that was voiced in this address, and which was expressed, directly or indirectly, in many others,—if this conception generally prevails, we have everything to hope for this republic from our common schools ; we must look to them to leaven the people and to establish the ideals which shall determine the perpetuity of the republic."

THE NATIONAL EDUCATIONAL ASSOCIATION will meet this year at Milwaukee, July 6-9. This is a week earlier than usual. The usual railroad fare has been secured, viz.: "One fare for the round trip," with this exception, \$2.50 will be added to the railroad fare, instead of \$2.00 as heretofore. It is stated that this extra fifty cents is to pay "the expenses of the Joint Railway Agency" at Milwaukee. This seems a *big fee*.

WHEN you send pay for the JOURNAL, kindly name the agent with whom you subscribed.

## **QUESTIONS AND ANSWERS.**

### **STATE BOARD QUESTIONS USED IN JANUARY.**

GEOGRAPHY.—1. State the general laws of relief.

2. What are tides? How caused? How affected by the physical configuration of the land?

3. What waters does the Erie canal connect? What cities at its extremities? Of what commercial advantage is this canal?

4. What geographical conditions have tended to develop the free institutions of England and Switzerland?

5. Wheat thrives in America as high as in 55° north latitude, in Europe as high as 60° north. Why does it thrive further north in Europe than in America?

6. What country receives most of the agricultural exports of the United States? What reason can you give why this is so? (*Select five.*)

HISTORY.—1. Sketch the career of John Quincy Adams and give an estimate of his character.

2. What is the state of American public feeling toward Great Britain? Account for this?

3. What was the immediate cause of the War of 1812? How was that question settled by the treaty of peace?

4. What questions were involved in the political campaign of 1872?

SCIENCE OF EDUCATION.—1. According to the Herbartian theory, what should determine the selection of the subject-matter of any study?

2. What is meant by a "lesson unity?"

3. Explain briefly each of the five formal steps in the process of teaching a new topic, namely, preparation, presentation, association and comparison, generalization, practical application.

4. Using some topic of your own selection, show how it would be taught according to this plan.

5. What reasons can be given for stating the aim of a recitation at first?

6. What is the difference between a percept and a concept?

7. Does the true method of teaching a percept differ from that of teaching a concept? (*Any five.*)

READING.—1. Describe the plan of teaching primary reading, as presented in the prefaces to the Indiana First, Second and Third Readers. 10.



2. When should a child begin the study of literary interpretation? What is the first step in literary interpretation? 10.
3. What do you understand by the terms, *theme*, *embodiment*, and *purpose*. 10.
4. Mention three qualities which serve as a test for good literature. 10.
5. "Fiction often states a higher truth than a mere statement of fact." "A character in fiction is a universal individual, or an individual who exemplifies some universal aspect of humanity." Cite some fable or short story that shows that the above is true. 10.
6. Read a selection to the County Superintendent. 50.

GRAMMAR.—1. Distinguish between the copula and predicate of a sentence. Illustrate.

2. State how each word is used in the following: "I can not paint what then I was."
3. Illustrate in a sentence four relations of the pronoun.
4. Illustrate the difference between the use of the preposition and the conjunction. Explain.
5. Use the words "will" and "shall" to express futurity, determination.
6. Suggest ways and means of correcting faulty English of pupils in recitation and conversation.

HISTORY OF CIVILIZATION.—1. Enumerate the general causes of the fall of the Roman Empire.

2. What were the "bequests of the ancient Roman civilization to modern Europe?"
3. What distinction does Guizot draw between *Christianity* and the *Christian Church*?
4. Sketch the development of the Christian Church through the first five centuries of the Christian era.
5. What were the principal services of the Christian Church to civilization in the early centuries of its existence?
6. Describe in general the state of society amongst the barbarians of Europe at the fall of Rome, and state what important contribution to civilization was made by the barbarians.
7. State the important elements contributed to civilization by the following: (a) the Greeks, (b) the Romans, (c) the Christians, (d) the barbarians of Europe. (Any five.)

ARITHMETIC.—1. Compare and contrast addition and multiplication and make two problems in each suitable for first year pupils.

2. Show how the second year number work differs from that of the first year.
3. If the fore wheels of a wagon be four feet in diameter and the hind wheels five feet, how many more revolutions will the former make than the latter in going a mile.
4. Explain as to a class taking the work for the first time, 6230-2784.
5. What is the side of a cube which contains as many cubic feet as a box 8 ft. 3 in. long, 3 ft. wide and 2 ft. 7 in. deep.

6. The capacity of a cubical cistern is 74,088 cu. in.; how many sq. ft. in the bottom of it? What is the length of the diagonal of one side?

7. Discuss the fundamental principles of arithmetic in their relations to common fractions. To decimal fractions.

8. When may things be compared? How? Illustrate the first method. The second.

**PHYSIOLOGY.**—1. What purposes should constantly animate the teacher of physiology? What methods are most likely to insure the realization of these purposes?

2. Draw a section of a bone. Label and describe the parts.

3. In case of a broken bone, what would you do till the physician arrives?

4. Select any five bones in the body which are used as levers, and show how each one is used.

5. Explain the connection between blood capillaries, lymph capillaries and tissue cells.

6. Explain in full how the oxygen of the air reaches the tissues.

7. What are the parts of a nerve fibre? What is the essential part?

8. What means would you resort to in the effort to restore one who has fainted?  
(Any five.)

**SCIENTIFIC TEMPERANCE.**—1. What are some of the commercial uses of alcohol? Is there anything that might be substituted for it? If so, what is it?

2. How are the products which result from the oxidation of the tissues modified if alcohol is taken into the body?

3. What is the cause of natural thirst?

4. Why is circulation quickened by a drink of alcohol?

5. What is the effect which alcohol has upon the red corpuscles? This in turn produces what effect?

6. What are some of the effects produced upon the system by the use of tea and coffee?

7. Why does smoking have a tendency to weaken the lungs?

(Select five.)

### ANSWERS TO PRECEDING QUESTIONS.

**ARITHMETIC.**—1. Addition and multiplication are both processes of uniting several numbers into one equivalent number. In multiplication, the addends are the same; in addition, they need not be the same. Multiplication is a convenient method of finding the sum of a given number of repetitions of a certain number. It is sometimes defined as the process of taking a certain given number as many times as there are units in another given number. Keeping within the limits as found in the "State Manual," we have: (a) Addition problems for the first year:—(1) Five marbles and two marbles are how many marbles? (2) A boy had six apples and bought three more; how many apples had he then?

(b) Multiplication problems for the first year:—(1) A stick of candy

costs one cent; what will 4 sticks of candy cost? (2) If an orange costs three cents, what will 3 oranges cost?

2. According to the "State Manual," the second year's work in arithmetic is similar to the work in the first in the development of ideas, and is different from the first "in the numbers dealt with; in being the imaginative stage, and in giving more prominence to practical notation." The first year's work is reviewed and applied to the new and advanced work of the second year. Objects for illustration need not be used so frequently, as the pupils instinctively *think* them—a habit due to the work of the first year, if well done. "In this year the signs  $\times$ ,  $+$ ,  $-$ ,  $=$ , are taught.

3.  $4 \times 3.1416 =$  circumference of fore wheel;  $5 \times 3.1416 =$  circumference of hind wheel;  $\frac{5280}{4 \times 3.1416} =$  revolutions of fore wheel;  $\frac{5280}{5 \times 3.1416} =$  revolutions of hind wheel;  $\frac{5280}{4 \times 3.1416} - \frac{5280}{5 \times 3.1416} = \frac{5280 \times 5 \times 3.1416}{4 \times 5 \times (3.1416)^2} - \frac{5280 \times 4 \times 3.1416}{4 \times 5 \times (3.1416)^2} = \frac{5280 \times 3.1416}{4 \times 5 \times (3.1416)^2} \times \frac{264}{3.1416} = 84.08$ , answer.

4.  $6280 - 2784 = ?$

There are two methods of procedure in finding the result of the above—one called the "borrowing" process, the other the "carrying" process. Teachers generally understand both and it is not necessary to give either here. (See Arithmetic.)

5.  $8 \text{ ft. } 3 \text{ in.} = 8\frac{3}{4} \text{ ft.} = 8\frac{3}{4} \text{ ft.}; 2 \text{ ft. } 7 \text{ in.} = 2\frac{7}{12} \text{ ft.} = 2\frac{1}{4} \text{ ft.}; 8\frac{3}{4} \times 2\frac{1}{4} \times \frac{1}{2} = 11\frac{1}{8} = 63.9$ .  $\sqrt{63.9} = 4$ —, answer.

6.  $\sqrt[3]{74088} = 42 =$  side of cistern;  $(42)^2 = 1764$ ;  $\sqrt[3]{1764} = 12\frac{1}{4}$ , the sq. ft. in the bottom;  $\sqrt{1764 + 1764} = \sqrt{3528} = 59.3 \text{ in.}$ , the length of the diagonal of one side.

7. In decimals as well as in whole numbers, the different orders of units increase from right to left, and decrease from left to right, in a tenfold ratio. In dealing with decimals, or fractions, or units, only numbers of the same kind or denomination can be added or subtracted. In multiplying, whether the numbers be units, or fractions, or decimals, one number is taken as many times, or such a part of a time, as there are units, or such a part of a unit, in the other number.

8. Things can be compared when they are of the same denomination. They are compared in two ways;—(a) By subtracting one from the other; this gives the *arithmetical difference*; as, the arithmetical difference of 3 and 9 is 6. (b) By dividing one by the other; this gives the *geometrical ratio*; as, the geometrical ratio of 4 and 16 is  $\frac{1}{4}$ .

HISTORY.—1. John Quincy Adams was born in Braintree, Mass., July 17, 1767. As a youth he accompanied his father on the latter's diplomatic missions to France and Holland, attending, first a school near Paris and afterwards the University of Leyden. In 1782 he was chosen as private secretary by Francis Dana, then newly appointed as minister to Russia. The Russian government refused to recognize Mr. Dana, whereupon young Adams, who had been in St. Petersburg some 14 months, left for France, traveling through Sweden, Denmark and Germany reaching Paris

six months later. While in Paris he assisted his father who was at this time engaged in the negotiations of the treaty of peace with Great Britain. In 1785 he returned to America to enter Harvard College, graduating in 1788. He then studied law and was admitted to the bar in 1791. While waiting for clients he contributed anonymously to the press articles discussing the public questions of the day. His ability was recognized by Washington who in 1794 appointed him minister to Holland, and in 1796 transferred him to Portugal. In 1797 his father appointed him minister to Germany, which post he held until Jefferson became President. Returning to America he resumed the practice of law, in Boston, was elected to the Massachusetts senate in 1802, and to the U. S. Senate in 1803. During his term in the Senate he took an independent position upon all public questions; approved Jefferson's purchase of Louisiana; thought England the most to blame for the commercial restrictions and paper blockades of 1806-7; favored war with her over the Leopard—Chesapeake outrage; and earnestly supported the embargo act. His independent course prevented his re-election. President Madison appointed him minister to Russia in 1809. He was one of the American members of the commission that negotiated the treaty of Ghent in 1814; was appointed minister to England in 1815; returned to America to become Secretary of State in Monroe's Cabinet. While Secretary of State he negotiated the Spanish cession of Florida; approved Jackson's conduct in invading Florida and hanging Arbuthnot and Ambrister; shared with Monroe the authorship of the Monroe Doctrine; asserted his belief that Congress possessed the constitutional power to prohibit slavery in the territories while territories and also when admitted as states. He became President in 1825. As President he maintained his independence of parties, refused to conciliate his enemies or bargain with his friends. His administration was Whig in character, favoring the National Bank, a high tariff, and internal improvements. He was a candidate for re-election but was overwhelmed by the uprising tide of Jackson's popularity. In 1831 he was elected to Congress from Massachusetts by the Anti-Mason party. He entered upon his duties possessed of a combination of ability and experience unequalled in either branch of Congress; devoted most of his time to attacking the institution of slavery under any and all forms in which it presented itself. In 1836 a gag-rule to stifle debate upon the slavery question was enacted, providing that petitions upon that subject should receive no consideration whatever. Mr. Adams then proceeded to make the repeal of this rule his principal business, renewing his attacks upon it at every session until he finally accomplished his object in 1845. On February 21, 1848, while sitting in his seat in the House he received a shock of paralysis. He was removed to the Speaker's room where he died two days later, February 23, 1848.

2. Since the successful revolt of the colonies, Great Britain has been regarded by the average American with more or less enmity. The original ill feeling of Revolutionary times has been prevented from dying out by belief that Great Britain has dealt, or has attempted to deal, unjustly with this country in every dispute that has arisen, and that she has made the United States the object of special imposition whenever circumstances permitted. However, of late years, the growth of this country in

power and influence, and the consequent belief that we are able to command the most respectful treatment of England, have caused the traditional feeling of unfriendliness to give place to one of mere suspicion. It is the general opinion that Great Britain does not scruple at any means whereby she may increase her territorial possessions, and that she is not to be trusted to act fairly, in any dispute which involves the extension of her imperial power. Mr. Burke Cochran, an American of much prominence, said on February 2:—"The disgrace brought on England by her sacrifice of justice has raised the suspicions of the civilized world from which she suffers to-day. Whenever she tries to negotiate with a foreign country she is beset with suspicions of her motives. Recently when trying to make a treaty with this country she was met at every step with the question, 'Why does she want to do this?' *England has not come into the forum of public opinion with clean hands.* Why do the men at Washington hesitate to ratify this treaty? A system for the peaceful solution of international difficulties would be a great boon. I would be the last to object to it. The obstacle of barbarity and crime rises up in the pathway of England and bids all the world to disrespect her. If it was proposed to make such a treaty with France, Germany, or Russia, do you suppose that they would come under any such suspicion? Why then do we now suspect England? When we were weak she attacked us on the high seas. And when we protested she burned our Capitol at Washington. We want England to arbitrate with the weak as well as the strong. We want to be sure that this is not a device to get us into legal complications and leave her free to perpetrate fresh outrages in Ireland or to seize new territory. I want to see universal arbitration, but the time has come for England to give proof that she will not coerce the weak and offer law suits to the strong.

3. There can hardly be said to be an *immediate cause* of the war of 1812 in the usual sense of those words. The most offensive act of Great Britain preceding the declaration of war was the adoption of the "Orders in Council." "The right of search," or the impressment of American seamen, had long been a matter of angry dispute, so long indeed, that historians generally have refrained from calling it an *immediate cause*; it was certainly the *chief* cause. Minor causes were the "Orders in Council," the affair of the "Chesapeake and Leopard," and also that of the "Little Belt," the inciting of the Indian hostilities by the British; and Harrison's campaign against the Indians.

4. The chief issues of the campaign of 1872 were:—(1). General amnesty, or the removal of all disabilities. (2). Local self-government in the South, or the withdrawal of the United States troops. (3). Civil service reform. (4). Specie payments. (5). Enforcement of the new amendments to the Constitution. (6). Tariff for protection. (7). Rights of the States.

GEOGRAPHY.—The general laws of relief are: (1). The continents rise gradually from the shores of the ocean to the interior to some line or ridge of greatest elevation. (2). The line or axis of greatest elevation is placed, not in the center, but nearer to one side of the continents. (3). The greatest elevations are in the south of the continents, there being a gradual rise

from the Arctic Circle, where the lands are lowest and flattest, on to the tropical regions. (4). The grand linear elevations, or mountain chains, extend in the line of the greatest length of the continents.

2. The tides are a periodic rising and falling of the waters of the ocean, caused by the attraction of the sun and moon, but chiefly of the latter on account of its greater proximity. If our planet were one great globe of water, the tides would be perfectly regular and continuous from east to west; but by the masses of land and their configuration, the course of the tidal wave is much obstructed and deflected. In inlets of the sea, with broad mouths and narrowing in the interior, the converging shores pile up the wave to a great height. Inland seas and gulfs whose openings are narrow and not in the course of the tidal wave, have small tides or none at all; and their areas are too limited to generate any tide waves of their own. The wave is retarded near the shore and advances very rapidly in the central portion of the ocean.

3. The Erie Canal connects Lake Erie with the Hudson River—the city of Buffalo with the city of Albany. It is of immense commercial advantage in furnishing water communication between the Great Lakes and the ocean. It has cheapened the cost of transportation, thereby being of great advantage to the producer, and stimulating him to effect increased production. No other canal has been so useful or valuable. The greater portion of the output of the surrounding country, of the adjacent interior, and of the great northwest, goes eastward to the sea. Railroads could not carry it all, and one writer says that the cultivation of thousands of acres, that would otherwise go uncultivated, is made possible through the shipping facilities offered by the Erie Canal.

4. When a country is surrounded by natural barriers, the inhabitants are usually left free to work out their own customs and policies. England is defended by the sea, and Switzerland by the mountains. The isolation in each case has had a great influence in determining the character of their institutions.

“The little nation of Switzerland has held its own against heavy odds in the rugged and almost unreachable fastnesses of its mountain home.”

“The supremacy of England to-day is largely the result of its being an island separated from the continent by a strait, narrow indeed, yet broad enough to develop a distinct and characteristic nation of people. If Ireland had not been a separate island, the Irish question would probably not be agitating the nation to-day. From the fact of its being a group of islands Great Britain, in large part, owes her supremacy as a naval power, and as a conqueror in distant lands.”—(*Trotter*).

5. The temperature in Northern Europe is higher than it is in North America in the same latitude. Why this is so, is a subject of dispute. Many authorities attribute the cause to the effect of the Gulf Stream.

6. Great Britain receives the larger part of the agricultural exports of the United States. Her enormous population and the scarcity of home production explains this fact.

SCIENTIFIC TEMPERANCE.—1. Alcohol is used chiefly as a solvent and

as a preservative; it is used sometimes when a very hot smokeless flame is desired, and for thermometers, etc. Different things might be substituted for its different uses, but no one thing could fill its place entirely.

2. Alcohol decreases the elimination of carbonic acid and the excretion of urea. It thus tends to retain these waste products in the system.

3. A deficiency of water in the blood is the cause of natural thirst.

4. Dr. Richardson says: "It is the dilatation of the minute blood vessels following upon the reduction of nervous control, which reduction has been induced by alcohol. With each beat of the heart a certain degree of resistance is offered by the vessels when their nervous supply is perfect, and the stroke of the heart is moderated in respect both to tension and to time. But when the vessels are rendered relaxed, the resistance is removed, the heart begins to run quicker, like a watch from which the pallets have been removed, and the heart stroke, losing nothing in force, is greatly increased in frequency, with a weakened recoil stroke."

5. "Possessing very strong solvent properties, alcohol acts most perniciously upon the red corpuscles, dissolving the iron out of them in whole, or in part, and occasioning the formation of black, oily specks. The corpuscles become considerably altered in shape; and instead of being plump and round, become flattened, elongated, and pale. This devitalized condition of the blood produces anaemia, or pallidity. The countenance lacks the rosy hue of health, and the lips are white. The red coloring matter dissolved out of the red globules is forced into the fine hair-like capillary vessels of the blood, and also into the ultimate tissues, causing irritation and disease.

6. "The excessive use of strong-made tea leads to nervousness, neuralgia, and indigestion. Coffee does not give rise to the nervous symptoms which follow the excessive use of tea. It should, however, be excluded from the diet of children and of the youth of both sexes, on account of its peculiar stimulant action."—(*Cutler*.)

"The action of coffee upon the system is similar to that of tea. It is a stimulant, and promotes the digestion and assimilation of food. It both enlivens the mind and invigorates the body, relieving the depression of fatigue, and in this way undoubtedly tends to diminish the liability to disease. There is a peculiar physiological effect exerted by coffee and tea,—a retardation of destructive metamorphosis. The renal products of muscular waste are found to be diminished after their use; while experience has shown that they might replace, in diet, a certain amount of ordinary food."—(*Huxley and Youmans*.)

"It has been affirmed that coffee and other substances containing the alkaloid *caffeine* has an influence in retarding the waste of tissue in the human frame, but careful and extended observation has demonstrated that they have no such effect."—(*Ency. Brit.*)

7. The lungs of the smoker suffer from two causes. Smoking depresses and weakens the nervous system; and the lungs thereby receive their share of this injurious effect.

Whether the smoker wills it or not, much smoke passes into the lungs, whose tissues are extremely delicate. Besides the poisonous effect, the smoke tends to shrivel the cell-walls, thereby decreasing the lung capacity.

SCIENCE OF EDUCATION.—1. Herbart's theory is that "virtue is the whole of the pedagogical purpose." Hence in the selection of material everything out of harmony with this theory must be excluded. Furthermore, the subject matter chosen must be such as to be serviceable in arousing *interest* and in securing *many-sidedness*.

2. By "lesson unity" is meant such a condition of interdependence, relationship, and connection, among the parts and topics of the lesson, that during the recitation a definite purpose will be accomplished (provided the teacher is "master of the situation.")

3. *Preparation*.—The teacher calls into consciousness the state of the pupils' mind as to how much they know; formulates in his own mind his plan of procedure, and arranges any necessary apparatus.

*Presentation*.—The teacher carries out his plan of procedure, and properly presents the new subject to the pupils' minds.

*Association and Comparison*.—The pupils are led to associate the new knowledge with the related old and to make comparisons.

*Generalization*.—This is the conclusion drawn from the preceding. The pupils are led to see that the truths learned are universally true.

*Application*.—The pupils are led to apply and test the new knowledge thoroughly in its relation to the old.

4. See "Appendix" to *State Outlines* for two illustrations.

5. It might be said that the teacher and the pupil both need to have a common end in view—and that they need to keep it in sight that there may be no irrelevant work done; that the teacher would therefore seek the clearest route leading to the aim; and that the pupil would have the opportunity of seeing the bearing that each step has towards the accomplishment of the final aim.

6. The complete mental product of the act of perceiving is called a *percept*, while the object perceived is present. A general notion of a class of objects is a *concept*.

A *percept* is the knowledge of a quality of an object gained through a *single* sense, as the cause of a sensation in that sense.

A concept is the product of the act of conception and is gained through the use of *several* senses. A percept is an individual notion. A concept is a general notion.

7. Fundamentally, it does not. The general principles that underlie method in teaching are the same for all subjects. The differences that occur in the methods are such as would simply be caused by the difference in the nature of the two topics.

GRAMMAR.—1. Truth is mighty. Here "mighty" is the predicate because it is the word expressing what is asserted of the subject; "is" is the copula because it is the word which joins the subject and predicate, and which expresses the thought relation.

[The above is not in accord with the majority of authors; they prefer to call "is mighty" the predicate, of which "is" is the verb, and "mighty" the attribute.]

2. "I" is the subject of "can paint." "Not" is a modal adverb



modifying "can;" *that*, understood, is the antecedent of "what," and is the direct object of "can paint." The clause "what then I was" modifies *that*, understood; "I" is the subject of this clause and "was what" the predicate. "What" is a predicate nominative. "Then" is an adverb of time modifying "was."

3. *My* friend said to *me*, "*I* think that you should punish *him*." *My* is used as possessive, *me* as the object of a preposition, *I* as a subject nominative, and *him* as a direct object of a verb.

4. A preposition shows the relation between its object and the word which its phrase modifies; hence, it shows relation between ideas of unequal rank; as "The sled ran into the ditch." There are two classes of conjunctions—*co-ordinate* and *subordinate*. Hence we find some conjunctions joining and bringing into relation ideas of equal rank—as, "Mary and John went home;" "I go, but I return." Other conjunctions join and bring into relations ideas of unequal rank; as, "We can not go because it is raining."

5. In the second and third persons *will* expresses simple futurity; as—(a) If you visit him, you will find him busy. (b) I think it will rain to-day. In the first person *will* is used to explain determination; as, "I will speak." In the first person *shall* is used to express futurity; as, "I shall read awhile."

In the second and third persons *shall* expresses (a) a promise, (b) a command, or (c) a threat. (a) You shall have these books to-morrow. (b) Thou shalt not steal. (c) He shall be punished for this.

6. The pupils should be allowed to call attention to one another's faults in recitation. The pupil making the error should repeat correctly the sentence in which it was made. A list of typical errors may be kept on the board in full view of the pupils and added to as new ones are noticed. When this is done habitually in recitation the pupils will notice errors and continue their mutual corrections in conversation. The *reasons* for the corrections should be given only to the older pupils.

HISTORY OF CIVILIZATION.—1. (a) Dissolution working within and barbarians attacking without (p. 39). (b) A general decrease of loyalty to the empire (p. 42). (c) General decay and negligence of government affairs, caused by the indolence and corruption of the people. (d) Failure to establish representative government (p. 39).

#### NOTES.

I. This migration of the northern nations is nothing else save the history of the wars between the free Germanic races and the Roman masters of the world: wars which terminated in the dissolution of the Roman Empire, and in the foundation and first formation of the modern states and nations.—*Schlegel*.

II. The fifth century opened with an increased activity and spirit of enterprise among the barbarian tribes which had been pressing on the empire, and had even gained a footing within its bounds. Three great waves of invasion may be distinguished: foremost and nearest were the Teutonic races; behind them came the Slavs; behind them again, and pressing strongly on all in front, were the Turanian hordes from the center of Asia, having in their front lines the Huns.—*R. W. Church*.

III. Surely the human race will be improved by the renewal which it will receive from the influx of these free-born warriors. Mankind, fresh from the hand of nature, and regenerated by this new infusion of youth and vigor, will no longer exhibit the vices and weaknesses of this decrepitude of humanity; their aspect will be erect, their step firm, their character manly. There are not wanting the means to advance them to perfection; the Roman law is at hand to connect them with each other; Christianity, to unite them to their Creator; they are already free. The world will, indeed, begin anew, but it will start to a race of happiness and glory.—*W. Smyth*.

IV. Many signs had long indicated the coming fall of Rome. The Roman people had become lost in the world which they had subdued. The old Roman life was corrupted by foreign elements, and debilitated by luxury.—*Wheeler*.

V. The decline of Rome was the natural and inevitable effect of immoderate greatness. Prosperity ripened the principles of decay; the causes of destruction multiplied with the extent of conquest; and as soon as time or accident had removed the artificial supports, the stupendous fabric yielded to the pressure of its own weight. The story of its ruin is simple and obvious; and instead of inquiring *why* the Roman Empire was destroyed, we should rather be surprised that it had subsisted so long.—*Gibbon*.

VI. The decay of the city had gradually impaired the value of the public works. The circus and theatres might still excite, but they seldom gratified, the desires of the people; the temples, which had escaped the zeal of the Christians, were no longer inhabited either by gods or men; the diminished crowds of the Romans were lost in the immense space of their baths and porticos; and the stately libraries and halls of justice became useless to an indolent generation, whose repose was seldom disturbed either by study or business.—*Gibbon*.

VII. It (the Roman Empire) was in a state analogous to that of the decrepit human frame when we say it is breaking up; the vital functions go on for a time, but weak and intermitting,—neither potions nor physicians can do more than postpone the evil hour. The throes of the perishing colossus were, however fearful. A glance at the countries which composed the vast heterogeneous mass of the Roman Empire will show us rottenness and corruption at the center, and utter disorganization towards the extremities.—*Mrs. Jameson*.

VIII. And with the Empire fell also what before in this western world was chiefly Roman; learning, valor, eloquence, history, civility, and even language itself, all these together, as it were, with equal peace, diminishing and decaying.—*Milton*.

IX. Such was the end of the Empire of the West. Rome had grown great for the reason that she had only conducted wars which were successive, each nation, by an inconceivable good fortune, not attacking her until another had been ruined. Rome was destroyed for the reason that all nations attacked her at once, and penetrated her dominions on all sides.—*Montesquieu*.

X. "Such was the end of this great Empire, that had conquered the world with its arms, and instructed mankind with its wisdom; that had risen

by temperance, and that fell by luxury ; that had been established by a spirit of patriotism, and that sunk into ruin when the Empire had become so extensive that the title of a Roman citizen was but an empty name."

2. The elements which passed from the Roman civilization into ours, were"—(a) The system of municipal corporations, and law in general. (b) The idea of absolute power. (p. 43-4) (c) The possibility of a world-empire. (p. 44, N).

3. The church was a systematic organization, a corporate body, with its system of government regulating all its affairs.

Christianity was a mere belief, an individual conviction. (p. 44-5).

*Note.*—We must carefully distinguish between the influence of the church as an ecclesiastical system, and the influence which was exerted by that genuine christianity which still lived through all these ages, however feebly, and which made itself felt in many places and at many times when its true spirit seemed most thoroughly lost. The failure to make this distinction has marked some prominent writers on the middle ages. It must be borne in mind that no one can understand the history of civilization who does not know that the ecclesiastical system is not Christianity, nor even a product of Christianity ; that Christianity is no more responsible, as a cause, for the results which flowed from it than it is for those which flowed from the Roman law ; but that it had its own separate life and separate influence, and that this life survived and this influence was felt in every century and in every generation.—*G. B. Adams.*

4. (a) The first Christians met together in various places, simply as congregations, merely to enjoy their common emotions, their common religious convictions. There was no organization whatever. (b) In these congregations, in time, there naturally arose leaders, men who through force of of character and intellect, morally influenced or governed the remainder. The need of rules and regulations soon brought about "a form of doctrine," rules of discipline, and the election of officers. The power was yet in the hands of the people. (c) The clergy became separated from the people and formed a distinct body, with its own government (p. 46-7-8-9).

5. (a) It preserved the world from falling a "prey to mere brute force" (p. 52). (b) It established the great truth "that there exists a law above all human law"—a divine law (p. 53). (c) It effects the separation of temporal and spiritual authority (p. 53-4). (d) It was the most powerful of the causes which overthrew the system of slavery of that period.—*G. B. Adams.* [Read note at bottom of page 52].

6. The barbarians loved liberty, activity without labor, and a life of enterprise and adventure. (P. 56)

Although inclined to be brutal, selfish, and passionate, they possessed something of a "noble and moral character in this taste for independence," (P. 57)—their savage life contained rare promise of a coming civilization. (Read note III appended to answer 1).

Their important contribution to civilization was the idea of *personal liberty, or independence.*

*Note.*—These German barbarians were something more than mere sav-

ages. They were ignorant. They were often cruel and bloodthirsty. They exhibited many of the habits and characteristics of savage life. But it was the savageness of a young and pure race, not that of a debased and degraded one. Upon them the terribly corrupt civilization with which they came in contact had no such poisonous and destroying effect as civilizations, by no means as corrupt as the Roman, have had on many savage peoples. They brought with them an almost unequalled capacity for becoming civilized. They readily adapted themselves to new ways, readily learned what there was to be taught them, even, in some cases, learned new languages so rapidly that, in a generation or two they had forgotten their own.—*G. B. Adams.*

7. Important elements contributed to civilization :—(a) By the *Greeks*.—Intellectual treasures,—art, science, literature and philosophy. (b) By the *Romans*.—(1) The idea of municipal corporations ; (2) and that of absolute power. Briefly, law and government. (P. 44), (c) By the *Christians*.—(1) The establishment of a higher law than man's. "Out of Judea has come the religion of the future, with its store of new ideas and forces." (2) The separation of temporal and spiritual power. (P. 53-4). (d) By the *Barbarians*.—(1) The idea of personal liberty ; and (2) that of personal fidelity, especially personal fealty (P. 57-8)—the "strong tie which bound the chief and his men together."

PHYSIOLOGY.—1. The purposes in the mind of the teacher should be (a) the cultivation of the observant faculties ; (b) the implanting of such a knowledge of the human system as will enable the possessor to obey the laws of health. The proper method is that of the laboratory ; bodies of mammals (dog, cat, rat, rabbit, etc.,) should be dissected, and the microscope used as much as possible.

3. While the patient is lying on the ground, cut off the garments around the broken limb. Do not increase the pain by pulling them off. Gently but firmly pull on the parts below the fracture until the limb reaches its full length. Hold it quietly in this position. This movement will pull the bone fragments from the torn flesh, will prevent sharp, painful muscular contractions, and will give the patient some ease. Let another person procure some thin strips of board, or lath, or straight sticks, or hollowed pieces of sheet iron, or even common straw cut to the length of the limb. Place some cloth or grass, in the form of even pads, above and below the broken part, then adjust around the parts a layer of the sticks or laths or bits of shingle or straw and then secure them above and below the break by cords and straps. Permit the splints to extend beyond the joints above and below.—*Cutler.*

4. (a) The radius :—fulcrum, elbow ; weight, hand ; power, *biceps*. (b) The humerus :—fulcrum, shoulder joint ; weight, forearm and hand ; power, some of the shoulder muscles. (c) The lower jaw :—fulcrum, the hinge joint of the jaw ; weight, the front part of the lower jaw ; power, the *masseter* muscle. (d) The tibia :—fulcrum, the knee joint ; weight, the foot ; power, muscles whose tendons pass over the knee joint. (e) The femur :—fulcrum, the hip joint ; weight, the part of the leg beyond the knee ; power, *rectus femoris*.

5. The lymph present in any organ gives up things to the cells there and gets things from them. Dialysis then commences between the lymph outside and the blood inside the capillaries; the blood gives up to the lymph new materials in place of those which it has lost, and takes from it the waste products which it has received from the tissues. The blood loses more liquid to the lymph through the capillary walls than it receives back at the same time; the excess is collected by the lymphatic capillaries.

6. The process of respiration gets the oxygen in contact with the blood, where it is absorbed by the red corpuscles. "These consist chiefly of haemoglobin, a substance which has the power of absorbing oxygen and forming a bright scarlet compound called oxyhaemoglobin. This oxyhaemoglobin very easily gives up its oxygen when it is placed under conditions where gas is scarce: the haemoglobin left behind has a dark purple color. The blood leaving the lungs by the pulmonary veins is bright red because all its haemoglobin has been turned into oxyhaemoglobin. From the left side of the heart it is conveyed by the branches of the aorta to all the organs of the body. These are constantly using oxygen, which is therefore very scarce in them, and as the blood flows through, its oxyhaemoglobin is broken up, the oxygen taken away, and dark purple-red haemoglobin left to be conveyed by the veins to the right auricle of the heart.—*Martin*.

7. A nerve fiber consists of the outside covering, or *primitive sheath*; inside this a fatty substance forming the *medullary sheath*; and in the center a core, the *axis cylinder*, which is the essential part of the fibre.

8. "Remove patient instantly from a crowd; place in a recumbent posture. Loosen the clothing. Give the patient as much fresh air as possible. Fanning and the sprinkling of water are useful."

READING.—1. See readers referred to for answer.

2. Near the time of completing the third reader. The first step in literary interpretation is to put one's self in the place of the author in thought and feeling,—i. e., to search out the theme.

3. (a) The *theme* is the central thought of the selection, the one to which all others converge. (b) The *purpose* is the effect which the writer desires to produce; the motive which urges the writer to utterance. (c) The *embodiment* is the imagery which mirrors forth the theme of the selection.

4. Three tests of good literature are:—(a) Does the theme appeal to universal experience? does it find a response in all mankind? In what plane of life does it have its setting? (b) Does it present real life, life as it is actually known to be—or does it present ideal life? (c) Is the truth presented experienced in feeling or merely cognized by the intellect? (See Literary Interpretations, P. 26-7).

5. For illustrations see Æsop's Fables, for example, "The Fox and the Grapes."

#### LITERARY INTERPRETATIONS.

"Self-Reliance" in Pedagogy.—"The only antidote for the constant tendency of the teacher to sink into a dead formalism" is to turn from books on pedagogy, "most of which furnish only a code of management for the

school room," and seek for ultimate truth in the nature of life. The multitude of details in the school room when referred to as unifying, vitalizing principle produce "a sort of pedagogical cramp in the soul" which can not be cured by devices or recipes for teaching. The remedy must be found in such works—philosophy or literature—as reveal the laws of soul development. "Self reliance" takes the teacher back to the source of principles, hitherto followed blindly, and reveals in himself, the universal self, the higher truth.

The soul is what it is by virtue of the fact that it seeks to be other than itself. In order to exist it must seek to exist, and this is a fundamental conception of mind present in its every act. Says Caird, "You can not comprehend its true nature in 'being' alone, for at every moment of its existence it at once is and is not; it is in giving up or losing itself; its true being is ceasing to be." "Self reliance," as the title suggests, is dealing with the *self* and is not concerned with the "*not self*;" with the *real* and not with the *ideal*. But the *self* becomes the *not self* and the *not self* the *self*: the *real* the *ideal* and the *ideal* the *real*. In "Self Reliance" Emerson shows us the universal in the individual and says, "Trust thyself. Great men have always done so, betraying the perception that the eternal was stirring at their hearts, working through their hands, predominating in all their being." In "The Over Soul" he reveals the individual in the universal: "The Supreme Critic on all the errors of the past and the present, and the only prophet of that which must be, is that great nature in which we rest as the earth lies in the soft arms of the atmosphere; that Unity, that Over Soul, within which every man's particular being is contained and made one with all." It matters little where we direct the attention, at "Self Reliance" or "The Over Soul," at the *real* or the *ideal*, for the process of development ends in their identity. The fundamental problem in pedagogy is concerned with the real in *becoming* the ideal, with the individual *becoming* the universal. To refer again to Caird, "The ideal nature is not immediate, but is reached by a process of growth or development. But the motion of development is one that can not be apprehended merely by affirmation or by a series of affirmations, but only by a process which includes affirmation and negation, or, more precisely, perpetual affirmation, perpetual negation, solved in re-affirmation." Method in education is this process by which the ideal nature becomes the individual. The ideal and real must meet; life must touch life. As Emerson insists over and over again in "Self Reliance," true teaching must always lead the pupil to himself and never away from himself; right teaching makes the child an active, living soul, who from every excursion into the infinite world of truth returns to himself and gives reality to the objective appearance in his own experience; he accepts no fact that does not satisfy the demands of his own reason; he insists that the alleged truth must correspond to the truth of his nature; the authority of teacher and text book can not satisfy his craving for reality; he becomes a measure unto himself of all truth; questions his own mind concerning everything presented from without, and no longer exists by authority but lives by truth.

J. E. MCGILVREY.

University of Illinois.

## FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. The should be received by March 18. Be prompt. Write only on one side of your paper.]

### SOLUTIONS TO PROBLEMS.

**PROBLEM 150.** An elliptical pond is to be surrounded by a picket fence. The diameters of the pond are 18 and 24 rds. How many pickets are required if they are two inches in width, and if they are placed 2 inches apart?

J. STOMMEL, Hanover Center.

Solution by JOHN MORROW, Charlestown :

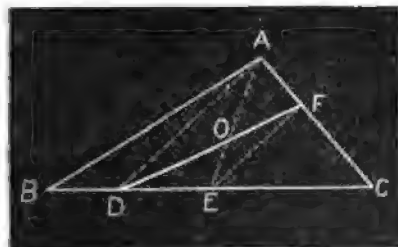
Let  $D$  and  $d$  represent the long and short diameters. Then

$\sqrt{\frac{24^2 + 18^2}{2}} \times 3.1416 = 66.6434$ , the number of rods in the circumference of the pond.  $66.6434 \text{ rds} = 13195.3932 \text{ inches}$ .  $13195.3932 \div 4 = 3298.8483$ , the number of pickets required.

[NOTE. When greater exactness is desired the following formula should be used. Circumference of ellipse =  $\sqrt{\frac{D^2 + d^2}{2}} - \frac{(D-d)^2}{8.8} \times 3.1416$ .—ED.]

**PROBLEM 156.** Divide a triangle into equivalent parts by a line drawn from a given point in one of its sides.

Solution by E. E. VANCE, Arcadia :



Let ABC be the given triangle, and D in BC the given point. Take E the mid-point of BC. Draw AD, and AE, and draw EF parallel to AD, cutting AC in F. Draw DF. It is the required line.

Proof :—Triangle ABE =  $\frac{1}{2}$  triangle ABC. Triangle AFE = triangle DEF. Therefore, triangle DOE = triangle AOF. Therefore,

$BDFA = \text{triangle ABE} = \frac{1}{2} \text{ triangle ABC}$ .

We received several solutions to the above.

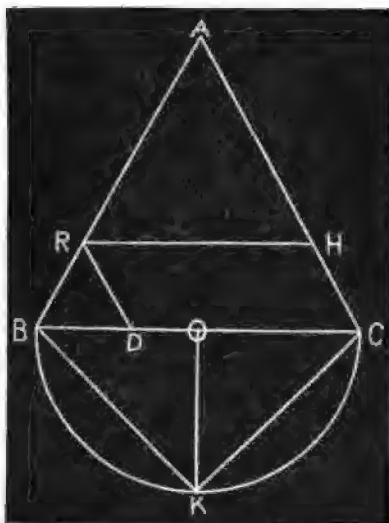
**PROBLEM 157.** Draw a triangle similar to a given triangle but with double area.

Solution by J. H. BOLDT, Lanesville :

Let ABC be the given triangle. Construct a right triangle FGH with the sides FH and FG each equal to the side AC of the given triangle. On AC or AC produced mark off AE equal to HG, the hypotenuse of the right triangle FGH. Draw a line through E parallel to CB and cutting AB or AB produced in D. Triangles ABC and ADE are similar.  $\overline{FG}^2 + \overline{FH}^2 = \overline{HG}^2$ .  $2AC^2 = \overline{HG}^2$ .  $2AC^2 = \overline{AE}^2$ . Therefore, triangle ADE is equal to twice triangle ABC, since similar triangles are proportional to the squares of their homologous sides.

**PROBLEM 158.** An equilateral triangle contains 320 sq. rds. Cut off a trapezoid containing 160 sq. rds.

Solution by THE INDIANAPOLIS HIGH SCHOOL MATHEMATICAL CLUB :



Let ABC be an equilateral triangle containing 320 sq. rds. Describe a semi-circle on BC as a diameter. From center O draw radius OK perpendicular to BC. Join CK. With C as a center and radius CK describe an arc cutting BC at D. From D draw a line parallel to AC, cutting AB at R. From R draw a line parallel to BC, cutting AC at H. Then RHBC is the required trapezoid. Proof :—Draw BK. BC is the hypotenuse of the right triangle BKC.  $\overline{BC}^2 = \overline{BK}^2 + \overline{CK}^2$ .  $\overline{BC}^2 = 2\overline{CK}^2 = 2\overline{CD}^2 = 2\overline{RH}^2$ . Therefore, triangle ABC is equal to twice triangle ARH, since similar triangles are proportional to the squares of their homologous sides.

**PROBLEM 159.** A has a certain sum of money from which he gives to B \$4 and one-sixth of what remains; he then gives to C \$5 and one-fifth of what remains, and finds that he has given away half of his money. How many dollars had A?

Solution by F. W. NIEMEIER, Rising Sun :

Let  $x$  = A's money. Then  $4 + \frac{x-4}{6}$  = what A gave to B.

$x - \left(4 + \frac{x-4}{6}\right)$  = what A had left after sharing with B.

Then  $5 + \frac{x - \left(4 + \frac{x-4}{6}\right) - 5}{5}$  = what A gave to C.

Half of A's money =  $\frac{x}{2}$ .

Therefore,  $4 + \frac{x-4}{6} + 5 + \frac{x - \left(4 + \frac{x-4}{6}\right) - 5}{5} = \frac{x}{2}$ .

Solving the equation, we get  $x = \$40$ , A's money.

D. E. RUPLÉ, Walkerton, and WALTER N. VANSOYOC, Whitesville solved this problem by arithmetic.

**PROBLEM 160.** A, B and C are three towns forming a triangle. A man has to walk from one to the next, ride thence to the next, and drive thence to his starting point. He can walk, ride and drive a mile in  $a$ ,  $b$  and  $c$  minutes respectively. If he starts from B, he takes  $a + c - b$  hours; and if he starts from C, he takes  $b + a - c$  hours; and if he starts from A, he takes  $c + b - a$  hours. Find the length of the circuit.



Solution by J. C. GREGG, Brazil:

Let  $BA = x$ ,  $AC = y$ , and  $CB = z$ . Then we are to find the value of  $x + y + z$ ;  $\frac{60}{a}$  = miles he can walk in an hour;  $\frac{60}{b}$  = miles he can ride in an hour;  $\frac{60}{c}$  = miles he can drive in an hour. Then by the conditions,  $\frac{ax}{60} + \frac{by}{60} + \frac{cz}{60} = a + c - b$ ; and  $\frac{az}{60} + \frac{bx}{60} + \frac{cy}{60} = b + a - c$ ; and  $\frac{ay}{60} + \frac{bz}{60} + \frac{cx}{60} = b + c - a$ . Adding these three equations we have  $\frac{a + b + c}{60} (x + y + z) = a + b + c$ . Therefore,  $x + y + z = 60$ , the miles in the circuit.

#### ANSWERS TO QUERIES.

47. Please tell through the JOURNAL the name of the "old bell ringer" who rang the Liberty Bell when the Declaration of Independence was proclaimed.

J. M. Matheny, Remington, writes that the man's name was the same as that of the Peninsula east of Asia, or *Corea*. Can any one give us a more extended answer?

48. What are the essentials of the "Pollard Method"? Please illustrate. Do you think it is better than either the word or the sentence method?

J. STOMMEL, Hanover Center.

No answer has been received to this one as yet. We would like to have the opinions of several teachers upon this point, so we postpone it until next issue.

49. Change the following phrase to an adverb; "*For this reason*, I spoke to them.

We would suggest the adverb *therefore*. Can anyone think of a better word?

50. What is known as the "Wheeler Compromise?"

On June 19, 1872, William Pitt Kellogg was nominated for Governor of Louisiana by what is known as the "custom house" branch of the Republican party, and in August, by an agreement with the branch that had nominated P. B. S. Pinchback, became the candidate of the whole party. The various wings of the Democratic party united on John McEnery. The election was held on Nov. 4, and Kellogg, on Nov. 16, obtained a temporary injunction in a United States court, restraining the returning-board from announcing the result, alleging among other things that changes had been illegally made in the board for the purpose of declaring McEnery elected. Judge Edward H. Durrell rendered a final decision in Kellogg's favor; but both rival boards were organized, two legislatures convened, each candidate was declared elected, and both were inaugurated on January 14, 1873. A committee of congress investigated the matter, and advised that a new election be held; but a bill to that effect was lost, and the administration recognized Mr. Kellogg as legal Governor of the State. The McEnery party finally appealed to arms, alleging that the Kellogg administration was a usurpation, and after a conflict with the metropolitan police, in the streets of the

city, seized the State and city buildings and property on September 14, and compelled Gov. Kellogg to take refuge in the custom house. President Grant immediately issued a proclamation ordering the insurgents to disperse, and by September 20, order had been restored by the United States troops, and the Kellogg government was re-established. The political excitement continued, and civil war was prevented only by the presence of the United States forces; but in 1875 there was a second congressional investigation in which the *Wheeler Compromise* was drawn up by which Kellogg was recognized as governor, and the State legislature became Republican in the senate and Democratic in the house.

APP. ENCY. OF AMER. BIOG. VOL. III.

51. Is the answer to problem 43, page 283, of the Indiana Complete Arithmetic correct?  
ELWOOD HAMMOND, Young's Creek.

This is the same as query 26, and was answered in the JOURNAL for February, 1896. However, we will answer it again. In the *new edition* the answer 42 is correct for the requirement in the problem has been changed to, "How many acres in the tract of land?" In the *old edition* this answer was incorrect for the requirement there was, "How many acres had he at first?" The answer there should have been  $32\frac{2}{3}$ . It was quite shrewd in the reviser to change the requirement instead of the answer, but the problem was weakened by so doing.

52. In example 22, page 237 in the Indiana arithmetic is one to consider \$950 the banker's principal and calculate the discount upon that, or is the amount of \$950 for 63 days at 6% the true face upon which to calculate the discount?  
HOMER MAGLEY, Columbia City.

This is JOURNAL problem No. 61. A solution by D. M. Deeg, Bloomington, will be found in the JOURNAL for May, 1895. Calculate the discount upon \$950.

### SOLUTIONS REQUESTED

Bought stock at 10% discount, which rose to 5% premium, and sold for cash; paying a debt of \$33, I invested the balance in stock at 2% premium, which, at par, left me \$11 less than at first; how much money had I at first?  
(PROB. 8, Page 212, Ray's Higher Arithmetic.)

Let 100% = his original money.

Then  $111\frac{1}{2}\%$  of original money = money after buying stock at 10% discount.

And  $116\frac{2}{3}\%$  of original money = money after stock rose to 5% premium.

$114\frac{5}{6}\%$  of original money = money after buying stock at 2% premium.

But in this is included at 2% premium the \$33 which he spent.

Taking that out,  $114\frac{5}{6}\%$  of original money — \$32.35  $\frac{1}{3}$  = 100% of original money — \$11, or,  $14\frac{5}{6}\%$  of original money = \$21.35  $\frac{1}{3}$ .

Then, 100% of original money =  $\frac{72\frac{2}{3}}{14\frac{5}{6}} \times \frac{11\frac{1}{3}}{100} \times 100 = 148.50 = \$148.50$ .

### CREDITS.

159, 157, J. D. French, Whiting; 159, T. S. Cowger, Monon; 156, 157, 158, Indianapolis High School Mathematical Club; 159, Millie B. Gray,

Remington; 150, 159, John Morrow, Charlestown; 156, 157, 158, 160, J. Stommel, Hanover Center; 159, 160, Alton Blunk, Crown Center; 159, Anna J. Giltner, Otto; 159, Claus Brink, Lake; 159, Walter N. Vanscoyoc, Whitesville; 156 (partial solution): 159, 160, Phineas T. Clark, Jasper; 156, 157, 158, E. E. Vance, Arcadia; 159, D. E. Rupel, Walkerton; 157, 158, Otto E. Grant, Columbia City; 159, Elmer E. Carter, Frankton; 157, 158, 159, J. H. Boldt, Lanesville; 159, James Blunt, Austin; 156, 157, 158, 159, 160, John C. Gregg, Brazil; 159, F. W. Niemeier, Rising Sun; 158, A. J. Cannons, Jeffersonville; 156, 157, 159, C. E. Smith, North Judson.

### PROBLEMS.

161. Divide a semi-circumference into two parts such that the radius shall be a mean proportional between the chords of the parts.—*John C. Gregg, Brazil.*

162. Factor the expression  $x^2 - 2xy - 8y^2 - 2x + 20y - 8$ .

163. A B C is any triangle. Take  $AF = \frac{1}{3} AC$ ;  $CD = \frac{1}{3} CB$ ; and  $BE = \frac{1}{3} BA$ . Connect FB, AD and EC. Let AD intersect FB at  $m$ , and CE at  $o$ ; let CE intersect FB at  $n$ . Find the area of  $mno$  in terms of ABC (162 and 163 were proposed by the *Indianapolis High School Mathematical Club*).

164. A horse is sold for \$181.25. The man who sells the horse gains as much per cent. as the horse cost him in dollars. What was the cost of the horse?—*James Blunt, Austin.*

165. A has a certain sum of money. He gives to B \$11 and one-thirtieth of what remains; he then gives to C \$12 and one-twelfth of what remains, and finds that he has given to each the same sum. How many dollars had A?

166. Two clocks begin to strike twelve together; one strikes it in 28 seconds, the other in 25 seconds; what is the interval between their fifth strokes?

167. 1 lb. of tea and 3 lbs. of sugar cost together \$1.50; if sugar were to rise 50 per cent. and tea 10 per cent. in price they would cost \$1.75; find the price of tea.

168. A, B and C start from the same point at the same moment to travel around an island 34 miles in circumference. A goes 13, B 7 and C 4 miles an hour. When and where will they first be together again?

169. The dimensions of a rectangular box are as 2:3:4, and the difference between the cost of covering it with sheet lead at 16c. and 17c. per square foot is \$1.17; find its dimensions.

170. Given  $x^2 + \frac{4}{x^2} = 14 + 6\left(x + \frac{2}{x}\right)$  to find  $x$ .

171. Given  $x^2 + y = 69$ ,  $y^2 + x = 33$  to find  $x$  and  $y$ .—*James Blunt, Austin.*

172.  $\frac{1}{4}$  of the cube of a number is one less than the cube of  $\frac{1}{4}$  of the number. What is the number?—*Jno. O. Sprngeon, Sweetser.*

173. Deduce the formula for the circumference of an ellipse in terms of the major and minor diameters.

## MISCELLANY.

### NORTHERN INDIANA TEACHERS' ASSOCIATION.

The Northern Association will meet at Elkhart, April 1, 2, 3. The program is full and all the departments are represented. Some of the ablest men of the entire country will be present and take part. The following is a part of the program for the general Association:

"Child Study," C. C. Van Liew, of the Illinois State Normal, and W. L. Bryan, Indiana University. "Social Aspect of Public Education" by Charles DeGarmo, the author. "The Beautiful as a Factor in Education," Arnold Tompkins. "The Success and Failure of the Public Schools," Mathilde Coffin, of Detroit, Mich.

Such an array of talent was never before concentrated on one program for a State meeting.

Round Table meetings will be held for city superintendents, county superintendents and high school principals.

The following sections will hold meetings with full and interesting programs: Art, Music, High School, Grade, Country or Village School.

**RAILROAD RATES.**—The unprecedented rate of *one fare for the round trip* has been secured. Teachers buy the round trip ticket before leaving home. Ticket agents should be notified early so that they will have the tickets on hands. Tickets will be on sale March 31 and April 1.

**HOTEL RATES:** Hotel Bucklen, without bath \$2.00, with bath \$2.50. Depot Hotel, \$1.75. Columbia, \$1.00. Hotel Golden, \$1.00. Rooms in private families with board may be secured by writing to Supt. D. W. Thomas, Elkhart, Indiana.

W. R. Snyder, of Muncie, is president, and W. C. Belman, of Hammond, is chairman of the executive committee. Write to either or to D. W. Thomas for programs or other information.

### A NINTH YEAR.

**WHEREAS,** It has become manifest that many pupils in the common schools of our State complete, or pass through, the eighth year course at an age that does not justify their taking up the higher branches; and

**WHEREAS,** There are many others, even though older, who are not prepared to take the high school course; therefore, be it

*Resolved,* That the teachers of Lawrence township, Marion county, recommend that the eighth year course be extended one year, either as a review year or as a year preparatory to the high school course.

That a copy of this resolution be furnished the INDIANA SCHOOL JOURNAL for publication.

Committee. { J. W. APPLE,  
WALTER BLACKBURN,  
F. O. BELZER.

PURDUE UNIVERSITY has recently sent out two "monographs" relating to food and its adulteration.

THE WHITE-SMITH PUBLISHING COMPANY, of Boston, have issued a neat catalogue of their music.

THE SOUTHERN INDIANA NORMAL, at Mitchell, reports very favorably both as to attendance and interest.

FULTON COUNTY.—Supt. Geo. R. Fish has issued, in a neat form, a synopsis of the school work and workers of his county.

PORTLAND.—The *High School Apropos* is an excellent sixteen-page, two-column paper. Its promoters deserve credit for their good work.

WATERLOO.—The *Exponent* is the name of the Waterloo high school paper. It looks well and reads well. Superintendent H. H. Keep has an article in the February issue.

MASSACHUSETTS has a compulsory education law, and among other things it compels school officers to provide high school privileges for every qualified pupil in the State. This is what Indiana needs.

THE Annual Report of the Marion county schools contains some interesting reading. The history, the information, the rules and the statistics are interesting and instructive. W. B. Flick is county superintendent and has his work well in hand.

ADAMS COUNTY.—Supt. J. F. Snow has issued a "Memoranda of Examinations for Teachers' License and County Diplomas" in a very neat form. It is unique in its character and a very valuable document. It contains some good advice and many valuable suggestions.

VALPARAISO.—Last month the JOURNAL announced the burning of one of the large dormitory buildings of the Northern Indiana Normal School. A letter from President Brown says, "The building was well insured and will be rebuilt at once, and more substantial than before."

THE HARVARD SUMMER SCHOOL offers strong attractions to western teachers, for besides gaining the Harvard methods and having six weeks of very thorough instruction students can visit the historic places which are within easy reach of Cambridge. Few places are so rich in historic associations.

THE CROWELL APPARATUS CO., of Indianapolis, has issued a descriptive catalogue of apparatus made that is very full and complete. Professor Crowell was for many years teacher of physics in the Indianapolis High School and is an expert in making and handling apparatus. Send for his catalogue.

THE SOUTHERN INDIANA TEACHERS' ASSOCIATION.—We regret that we must go to press without a report from the executive committee of the Southern Indiana Teachers' Association. We know these facts however. The meeting will be held in Franklin, April 8, 9, 10. We know, also, that Arnold Tompkins and Professor Jackman, of Cook County Normal, are on the program. Teachers can rest assured that the program will be a good one and that they will be well provided for. For information write to Will Featheringill, Franklin.

THE FIRST SUPPLEMENT OF THE SECOND YEAR BOOK OF THE NATIONAL HERBERT SOCIETY has just been issued. It contains the paper read by J. W. Jenks of Cornell University, at the recent National Superintendents' Association on "Training for Citizenship." This is a valuable paper. A person can become a member of this Herbert society by paying an annual fee of \$1, which entitles him to the year book and two supplements. For particulars address Dr. Chas. A. McMurry, Chicago University, Chicago.

ATTENTION of superintendents and trustees of schools is called to the order of the State Board of Health, passed in September, making the disinfecting of schools compulsory. This affects not only the public schools but all colleges and other institutions of learning. The order provides a severe penalty, which it is within the power of the county health officer to enforce by filing information of neglect with any justice of the peace. A number of school boards and trustees, as well as the Indianapolis schools, have complied with the law.

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### PERSONAL.

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W. F. L. SANDERS, who has been seriously ill for two months past, is much better, but is not able to do full work.

PARRY'S POMONA NURSERIES, located at Parry, N. J., occupies three hundred acres of land. Send for catalogue, sent free.

CHARLES ZIGLER, one of the leading teachers of LaPorte County, has been appointed county superintendent *vice* O. L. Galbreth, resigned.

JOHN W. PERRIN, formerly an Indiana teacher is now Professor of History in Allegheny College, at Meadville, Penn. He has taken a post graduate course at John Hopkins' and stands high in his specialty.

J. T. MERRILL, for more than twenty-five years superintendent of the Lafayette schools, but now superintendent of the schools of Cedar Rapids, Iowa, attended the late National Convention held at Indianapolis. He was greeted by a large number of his old Hoosier friends.

ARNOLD TOMPKINS, now of the University of Illinois, attended the recent National Superintendents' Association, and was greeted by a host of Hoosier friends. He reports his work as delightful, and the number in his department as more than double what it was last year.

MARY EILEEN AHERN, formerly State Librarian for Indiana, after having completed her course of study as a librarian in Chicago, has been appointed editor of the *Public Libraries*, published in Chicago. Miss Ahern has not forgotten her Indiana friends and they have not forgotten her.

HERVY D. VORIES, ex-Superintendent of Public Instruction, has purchased the Spencerian Business College of Indianapolis, and hereafter will be the head of this institution. Mr. Vories has had experience as a practical book-keeper and as a teacher of book-keeping, and this, together with his experience as a common school teacher and his business experience, especially fits him for such an enterprise. He has planned for a spring normal term. See his ad. on another page.

HORACE S. TARBELL, now of Providence, R. I., but for six years superintendent of the Indianapolis schools, attended the National Superintendents' Association, recently held at Indianapolis, and was greeted by many old friends. Mr. Tarbell is very successful in his work at Providence, and likes very much his home in "Little Rhody."

S. E. HARWOOD, a former Indiana teacher, but now a professor in the Southern Illinois Normal School, at Carbondale, recently had an exciting experience. He awoke in the night and discovered a burglar in his room. He and the burglar exchanged pistol shots and each hit the other. The burglar fell to the floor but afterward arose and made his escape. Professor Harwood was seriously but not dangerously wounded. On this occasion he exhibited in a striking way what all his intimate friends give him credit for—courage.

MRS. MATTIE CURL DENNIS, wife of Prof. Dennis, of Earlham College, has passed over to the other shore, and leaves a host of friends to mourn her departure. She was a woman of rare spirit, and although an invalid much of her life, accomplished more than most persons of robust health. She was always a student and always a teacher. She was a native of Indiana and began teaching at the age of sixteen. She graduated at the Normal School at Lebanon, Ohio, and later at the Indiana State Normal. She taught at Bloomingdale Academy, Indianapolis, Richmond and at Earlham College. She was a teacher of unusual power, because she was always full of her subject and had the ability to stimulate others to do their best and be their best. She was for several years a member of the Reading Circle Board, was of special service there on account of her knowledge of good books for children. Mrs. Dennis has not done any regular teaching for many years, but has been all the time at work with various literary classes and clubs in Richmond. At the memorial services held in the largest church in Richmond, eight of these clubs were represented and paid tribute to her memory. Hon. W. D. Foulke, President of one of the clubs used this language: "The loss of Mrs. Dennis to this community is greater than the loss of any other single member would have been. In the development of the life of our people, in adding character, she has done more than any other person in our midst." She has fought a good fight and is now reaping her reward.

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# Headache

## Horsford's Acid Phosphate

This preparation by its action in promoting digestion, and as a nerve food, tends to prevent and alleviate the headache arising from a disordered stomach, or that of a nervous origin.

Dr. F. A. Roberts, Waterville, Me., says: "Have found it of great benefit in nervous headache, nervous dyspepsia and neuralgia; and think it is giving great satisfaction when it is thoroughly tried."

Descriptive pamphlet free on application to Rumford Chemical Works, Providence, R. I. Beware of substitutes and imitations. For sale by all Druggists. 7-11

### BOOK TABLE.

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## ON THE RELATION OF OTHER SUBJECTS TO THE WORK IN ENGLISH.

[Read before the English Section of the Conference held by Chicago University with its affiliated High Schools, November 13, 1896, by MRS. LOIS G. HUFFORD, teacher of English Literature in the Indianapolis High School.]

In a review of this century of scientific advance from the side of the science of education, the attention is arrested by two prominent features: *First*, that in education, as in the industrial world, specializing has become a marked characteristic; *Second*, that philosophic thought as applied to education is concerning itself mainly with discovering the true grounds upon which every subject taught may continue to claim a place in the curriculum—an inquiry which necessarily includes a view of its relations to all other subjects in the course.

The topic which I am to consider here falls under the general subject of correlation of studies, and must, therefore, be viewed in the light of such correlation. Every resolution, being in its very nature extreme, is followed by a corresponding reaction. The revolution in the educational world, which, within the last forty years, has dispossessed the classics of exclusive sovereignty, and established science as joint ruler, has not been unattended by some disturbance of the equilibrium.

Whatever may be justly urged against the reign of the classics in education, it must be admitted that the exact language training then in vogue gave a mastery of the mother tongue as well as a knowledge of Greek and Latin. It is not surprising, therefore, that the relaxing of this precise linguistic drill consequent upon

the extension of courses of study to admit the new sciences should have reacted at first, to beget slovenly habits in the use of English. The emphatic assertions of the Harvard examiners concerning what they term "the most unhappy divergence found to exist between theory and practice in one most important branch of education," viz., English, were confirmed by the observations of educators generally. This recognition of a widespread and lamentable deficiency has resulted in giving the study of English great prominence in the curriculum of both high school and college.

Paradoxical as it may seem, however, the effect of this extreme specializing of English has, thus far, proved detrimental to the practical use of English on the part of pupils outside the English class-room. The explanation of this apparent contradiction existing between practice and theory is to be found in the fact that the ranking of English as a special subject for study has, in many cases, caused teachers, as well as students, to regard English as entirely separate and distinct from other subjects. To correct this erroneous impression and restore the true balance, educators must universally recognize the natural and necessary relation of other subjects to the work in English. In the effort to determine this co-relation, I wish to be understood as considering the question from the standpoint of the work of secondary schools.

The study of English as it is now pursued has three distinct functions: *First*, that of instruction leading to the habitual use of correct and idiomatic English; *Second*, that of training in the effective use of language for the sake of acquiring ease and power in oral and written expression—or, in common parlance, teaching the art of composition; *Third*, that of introducing pupils to the masters in English literature.

In the assignment of work, the teacher of English is rightly expected to include in his teaching all three of these aspects of the study. As a specialized branch of study, however, I claim that only the third phase can be properly intended, for it is English literature alone that can be distinguished as an independent branch of investigation. In common with every other subject, it deals with thought expressed in words; and for the understanding of every subject in the course, an acquaintance with English words and forms of speech is essential. It is in the first two functions of English then, training in the habitual use of correct and effective expression, that we shall find the common ground and the common duty of all teachers in the secondary schools.

Were not practice so at variance with theory, it might seem an offence to suggest that every lesson ought to involve training in the use of clear and precise English. So long, however, as teachers of mathematics accept from pupils statements that are elliptical, vague, or in any way, incomplete; so long as the science teacher allows barbarisms to pass unchallenged; so long as translations are accepted, expressed in English words to be sure, but so arranged and so false idiomatically as to obscure rather than to transmit the thought of the original—and all this on the untenable assumption, "I am not teaching English"—just so long will it be necessary to reassert and with increasing emphasis, the truth that every school exercise should have as one of its aims, the acquiring of right habits in English expression.

Eternal vigilance is the price of habitual correctness. Probably, we shall all admit that the frequent reading of writers whose style is faultless is one means of gaining command of good English; but when I find, as I often do, pupils who are in the habit of making companions of writers of excellence, yet whose own sentences are half-formed, and otherwise very faulty, I am convinced that some other source of training is imperatively needed. Boys and girls will imitate the speech of those with whom they are daily associated. All teachers should be models in the use of clear, correct, and precise language. The atmosphere of every school should be surcharged with a sentiment that condemns erroneous English, and that will not tolerate hazy, meaningless statements. When the educational conscience is duly quickened, it will not be necessary for the teacher of English to "decline sole responsibility for the formative influence of the school upon habits of expression," for teachers of other subjects will recognize their equal responsibility in this matter.

The relation of other subjects to the first function of the work in English is one of correspondence. Assuming that the correct theory has been taught by means of the study of English grammar, *i. e.* that the pupil has gained a working knowledge of the tools of expression, teachers of every subject must insist that the language used in reporting facts, or in expressing the pupil's own ideas, shall not violate any grammatical principles.

In giving my views upon the relation of the work in other subjects and that of the second function of English teaching—training in the art of composition—I will say that I find myself

in perfect accord with the opinion expressed by Mr. Samuel Thurber, who says : " Composition should accompany every subject in which English expression is practised, as an auxiliary of the instruction. This means that composition is to be attended to in every subject taught." The relation in this phase is one of parallelism ; a side-by-side training.

At this point, I desire to express my deep sense of the debt of gratitude which composition-writing owes to the teachings of science. Those of us whose experience as high school pupils dates back twenty-five or thirty years will recall the painful efforts then made to compose something out of nothing ; the vain searching in the cloudy confusion of brain-bewilderment for ideas upon subjects utterly foreign to our very limited experience of life. Perhaps we may even revive the thrill of pride with which we read the repetitions of hackneyed phrases which constituted what we were pleased to call our " compositions " upon abstract subjects about which we had no definite ideas. Composition-writing was then too often a straining after an illusive originality ; the product, in many cases, only fantastic conceits, or worse—meaningless verbiage.

Science has made all teaching scientific ; it has substituted rational methods for the irrational ones formerly in vogue. It has taught teachers of composition one lesson of value—to look for the near-at-hand in assigning themes ; to foster habits of investigation on the parts of pupils.

Requirements in composition-writing are very different from what they were ten, or even five years ago. Whereas, formerly, what was called a long composition, supposed to embody the results of profound thinking, was demanded of high school pupils once a month, or once a quarter, now, in some high schools, at least, formal compositions on themes having no relation to the subjects of study are no longer required. The cultivation of power in oral expression is receiving its due share of attention, ability to think on one's feet and to express the thought in clear and forcible English being recognized as an important factor in mental training.

It was to be expected that this reform should begin in what has been regarded as the special domain of composition-writing, as one feature of the teaching of English. The study of literature opens so many and so various paths inviting investigation

and comparison, that the teacher finds in this connection a superabundance of material for theme-writing and class conversation. With skillful management, the same piece of literature will be examined by the pupils again and again, without loss of interest, and with the eager delight of the lover of nature searching oft-trodden ground for fresh beauties. By this plan, there is also opportunity for daily practice in the writing of paragraphs in a few minutes (a time limit being given), and for oral criticism of one another's work.

But the reform in teaching composition is only half accomplished so long as it is confined to the work in English. Other subjects equally invite to investigation, and call for reports of discoveries made. Unless pupils are made to realize that their records of experiments in physics and chemistry; their reports concerning specimens examined in the biological laboratory; their accounts of historical matter, whether oral or written; their discussions of questions in civics; their translations from foreign languages, ancient or modern; in short, that all class exercises are really composition, and to be judged as such, the habit of uniformly using correct and effective language cannot be formed, and the secondary school will have failed to give its pupils practical command of the most useful of all tools in the workshop of life.

When training in the art of composition becomes a regular feature of the work in all departments, several practical gains will be apparent. Among these I note: *First*, the making a more vital connection between the school and every-day life. However we may differ in opinion concerning methods, I am sure that we all agree in thinking that the prime object in school training is to develop power. Other things being equal, I think it will be admitted that influence is largely proportional to one's ability to communicate ideas effectively and to adapt one's self to all sorts of minds. The power of ready adaptation implies tact, sympathy, imagination, insight into character, discriminating judgment. You may say that that is a matter of temperament. I claim that it can, to a large extent, be developed by culture; and that, for such cultivation, the art of composition when taught as it should be in connection with every subject, can do more than any other one means.

Some eminent educators would banish the study of rhetoric

from secondary schools. If rhetorical study is confined to word-by-word repetition of a set of rules, I consider their objection well founded ; but, after long experience in teaching composition, I am convinced that rhetoric can be so taught as to be second to no other study in its vitalizing power.

The pupil must first be disabused of the mistaken notion that the study of rhetoric is of practical value only to the writer. He must be led to see that, if he would not be a cipher in the world, he must learn how to influence other minds by means of the words that he speaks, whether in communicating knowledge, in moulding opinion, or in affecting conduct. There is no relation in every-day life in which one who is master of the principles of rhetorical art will not find himself at an advantage.

It is not the business of the secondary school to devote its energies to the training of future authors, rejoiced though every teacher of English is to discover signs of literary ability. It is the duty of the high school to give to every boy and girl who enters its classes such training as will make them men and women able to influence their generation. The percentage of illustrious scientists, historians, or mathematicians which the high schools turn out will hardly exceed that of great writers. The storing away in the brain of the facts of history or science is not the prime object in studying those subjects. To be able to impart such knowledge clearly, to apply it in the business of the citizen, to use it in the conduct of all life is of first importance. For this reason, composition should be practised in connection with every subject, the teacher taking pains to impress pupils with the fact that they have constant use for persuasion, argument and explanation, in the common every-day relations of home and business life.

The *second* gain that I would mention is a corollary of the first—that of learning to discriminate in practice between the different kinds of composition. From the classification often found in programmes of high school commencement exercises, one might be led to infer that essays are all feminine ; orations all masculine. As a matter of fact, it has often been the case that all the composition work required of high school pupils has been of the simplest essay type. Even debates so-called, are often entirely lacking in the use of true argumentative forms of discourse.

Written exercises in connection with the study of civil government and history give excellent opportunity for training in argument, oratory, and narration. It is easy to teach the true method of scientific exposition along with the study of the sciences. The report of the committee made to the high school section at the last meeting of the National Education Association shows that teachers of the classics are alive to the importance of making translation a better training in English composition.

In illustration of what can be accomplished by way of practice in different forms of composition, I offer the following exercise which was recently given in a high school class that was studying the novel. The teacher gave these directions: Select a dramatic moment in Scott's "*Ivanhoe*:" *First*, Give the account in plain language as briefly as possible; *Second*, Describe it in pictorial language; *Third*, Write your own comment upon it.

The dramatic moment in the episode of "*Ulrica in the Turret*" was selected by the pupil whose exercise I quote.

I. In plain language:—"When the fire was well under progress, Ulrica appeared upon a high turret, singing a Saxon war song. The turret resisted the flames to the last, when, with a loud crash, it fell, and Ulrica was buried with the ruins."

II. Pictorial account:—"The angry flames are fast spreading through the castle and the blazing structure can be seen for miles around reflected upon the evening sky. Who is this who suddenly appears upon yon eastern turret? It is the crazed Ulrica. See her uncovered head and straggling, disheveled hair! Note the vindictive gleam of her blazing eye! Hear her singing in discordant tones the Saxon war song, as she wildly brandishes her staff! The smoke rolls upward, the flames approach nearer; with a loud crash, the turret falls, and all is over."

III. Comment:—"This is one of the most dramatic pictures in '*Ivanhoe*.' There is a horrible fascination in the scene. We wait in shuddering suspense for the falling of the turret upon which Ulrica stands, and close our eyes upon the dreadful picture, although we know that death to her is a release."

In similar ways, written exercises based upon the work in other subjects might give efficient training in discriminating different kinds of composition.

The *third* gain resulting from such a course would be seen in the college work of pupils so trained. It would manifest itself in

an increased ability to comprehend every subject studied, and in the power to report the results of study in clear, appropriate language.

Entrance examinations in English, as now given, while they serve the purpose of testing the candidates' working knowledge of English forms, tend to foster the impression that English and English literature are synonymous terms, and that one's acquaintance with correct English is best discovered through composition exercises based upon English literary masterpieces. Especially is this the case, where candidates may be exempted from examination in every other subject.

In the interest of more intelligent work in all departments, it is to be hoped that the colleges will examine the English used in science, in translations, etc., and make facility and correctness of expression in other subjects than English literature a condition of admission. The stand recently taken by Harvard seems to be in this direction. Last month, October 1896, it was resolved by the Board of Examiners of that university, that "every candidate for admission to the undergraduate departments shall give evidence that he can write English with such neatness and skill in penmanship, correctness in spelling and grammar, and facility of expression as will enable him to enter, without further elementary instruction, on the elective studies to which he proposes to devote himself, including the more advanced courses in English composition, and that the faculty be requested to press steadily towards the attainment of this end."

When this step in advance is really taken, the colleges will no longer complain that they have to do the work of secondary schools, for those whom they admit will be fully prepared to do true collegiate work. For when colleges and high schools co-operate to secure the formation of the habit of correct and effective expression in every branch of study, the question of what preparation in English shall be demanded for entrance to college will be answered. And if high schools give an all-round, complete training in the art of composition, such as is possible only by its practice as an auxiliary of the work in every subject, it will not be necessary to include in the English class-study all the pieces of literature upon which the college examination is to be based in any given year, for the pupil will have learned how to interpret and to examine critically any masterpiece, and can do some of the preparatory reading without the aid of a teacher.



To bring about this much-to-be-desired reform by which the true relation of the other branches with the work in English shall be established, the co-operation of all the teachers in any school is needed.

The multiplying of composition exercises consequent upon such extension may seem to be an insuperable objection to the plan, for it will be argued that teachers of all branches already have all the work that ought to be required of them. It is certain that the writing of numbers of exercises which receive no critical examination is detrimental to the forming of good habits of expression. But, however insufficient for such critical work the teaching force may be as schools are now constituted, we may depend upon it that whatever methods can be shown to be dictated by common-sense psychology as applied to teaching will eventually be adopted, and provision made for carrying them into execution.

It is not necessary to require many long compositions in any subject. The teacher will find it comparatively easy to criticise several short exercises, and the main principles of common construction can be taught by the paragraph. Fewer exercises carefully written and critically examined by the teacher, and afterwards re-written will be found far more effective as training than numerous longer ones that receive little critical attention.

In schools where different subjects are taught by the same teacher, it will be easy to divide the written work among the different branches, and so to impress the pupils with the idea that composition belongs equally to all subjects of study. In schools where the work is specialized, the English expression used orally, or in brief written statements, can surely be corrected by any competent teacher. For the more lengthy compositions called for in classes in science, history, foreign languages or mathematics, there should be two examiners. The class teacher should read them to judge the correctness or adequacy of the subject-matter used, and a special composition teacher should criticise them as to grammatical correctness and rhetorical effectiveness.

Since the teaching of English has received so much attention, it has been customary in a high school of an important eastern city to make up the commencement exercises from the best compositions written in the classes in English literature. Whether read in public or not, in my opinion, it is desirable that pupils

receiving diplomas from high schools should write a carefully thought-out composition. By the time boys and girls are ready to graduate from the secondary school, their interest in certain special lines of study has usually been awakened. There are many high school graduates whose tastes lie rather in the direction of science, or civics, or some department of knowledge other than English literature. Teachers of those subjects can direct researches in their own specialty better than it can be done by the teacher of English, but the latter is better qualified to criticise the composition structure.

The relations between English and the work in other branches must be recognized in practice, as well as in theory. By daily co-operative effort intelligently directed and wisely applied, the secondary schools will send to college, and to the active world of business and society an increasingly large number of clear thinkers who are able to express their ideas in pure, forcible English.

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### THE RELATION OF HISTORY AND GEOGRAPHY.

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The earth presents itself to our apprehension under two aspects. It is, first, a thing in itself, and as such, its phenomena are purely physical, calling for the investigation of the specialist in physical science. Again, it may be viewed as the home of man, under which aspect it is to be studied chiefly in relation to human activity. Between physical geography and anthropogeography, there is the closest possible connection. In the child's earliest conception of the outward world, the works of man and the works of nature are not distinguished as to kind, the tree, the brook and the hill being thought of as in the same order of being as the house, the canal or the railway embankment. Later on, when the critical faculty has dawned, there is a tendency, at first, to set off each order of phenomena into a realm entirely separate. Only with the coming of mature judgment are the relations of the two rightly adjusted in thought, so that their vital connection becomes apparent.

In the beginning, therefore, it must be denied that geographical forces are supreme in history. To contend, as is sometimes done, that the history of man is but the product of forces at work

in his outward environment is entirely misleading. Thus, a recent writer in the *Educational Review* declares: "At some time in the near future, the teacher of history will doubtless discover what the critical student of history has already made the basis of study; namely, that history is nothing more than an echo of the operation of geographic laws; that humankind as well as other organic life is a slave of hunger; that all migrations and dispersions of peoples are merely the quantitative expression of moisture and temperature: and that the nationalization of government is merely a machinery for the rapid and equable distribution of food."

That the "critical student of history" has made this the basis of study will be news to a considerable body of historical workers. Such a view leaves out of account the innate power of invention and the capacity of the mind to adapt and conquer natural forces for its own ends. It makes men the helpless sport, in the last resort, of the material world.

It is equally fallacious, on the other hand, to contend that history, or any part of it, had not been influenced to some extent by geographical conditions. And yet, no less an authority than Commissioner Harris has recently ventured the strange assertion that "the geographical environment of the American continent has not materially modified the development of American civilization, already on its course of elevation when the emigrants were leaving their European homes for this country." Dr. Harris further holds that the proper study of environment with us "has, therefore, become a sort of inventory of the products of nature which are to serve as raw materials for human ingenuity to transmute into articles of use."

We are by no means shut up to a choice between two such extreme views. Neither mind nor nature alone is the complete and sufficient explanation of the cause of civilization, but such explanation is found rather in the interaction of the two. The geographer, Ratzel, believes that it is idle to attempt to deduce from this very complex interaction any absolute general law of progress, for the reason that the same natural conditions have in different ages produced very different results on the people subjected to them. Thus, in the more ancient times, the Alps and Pyrenees were considered as effective barriers between the north and the south of Europe, but the genius of Hannibal and Napoleon

triumphed over them. Again, if it be contended that it was their rare climate and their favorable location alone that made the ancient Greeks a great people, what shall be said of the modern Greeks who, with the same environments, are among the most backward people of Europe?

The true interpretation of civilization, then, is found in neither history nor geography alone, but in a combination of the two. And if this fact applies to the higher and more philosophical study of these subjects, all the more does it apply to that earlier study of them when the chief end sought is not philosophical interpretation, and when every step in knowledge must be assisted by all possible helps. Very many workers in these fields are coming to believe that the two branches can be best taught when taught together, the geographical and the historical side of the facts supplementing and re-enforcing each other. A few examples will illustrate the method and its advantages.

In teaching the geography of Europe, it is difficult to secure an intelligent grasp of its physical features if they be considered merely as isolated phenomena. It is only when a human interest is thrown around them that they become alive. Rome, Corsica, Geneva, the Seine, the Thames, are abstract terms until they are clothed with a living reality by being brought into connection with the life of men—and abstract terms are disastrous things if indulged in too freely. The Rhine, for instance, is to the child merely a name until he learns to think of it as a river like the rivers which he has seen, and until he becomes aware that it stands for a great deal to the people living in its vicinity. Not only ought he to be told about its castles and vineyards, but above all, the thought of it ought to be connected with the great historical events that have made it what it is to the people along its course. Near its banks, Charlemagne built his famous castle of Jügelheim; by it stands Mayence, forever associated with the story of Gutenberg and the invention of printing; as it approaches the sea, it spreads into many branches, making of the country a great marsh. What more interesting study than to explain the geographical origin of Holland, and associate with this the history of the heroic struggles of the Dutch against their two great enemies, the sea and Spain. To attempt to teach either side alone is to neglect many facts most essential to a correct understanding of the subject, as well as to lose aid which the one might give to the other.

For, from the point of view of mere geography, the Rhine is only a river flowing down from the Alps to the German Ocean with tributaries right and left. But to the populations of central Europe as history shows them, it is a spiritual being, around which cling the dearest interests of patriotism. To the German, the Rhine stands for the thought or the memory of his Fatherland, which is given to him to guard it as a sacred trust. To the Frenchman, it stands for an ideal eastern frontier, now lost, but still cherished and destined to be regained. Of the tributaries of the Rhine, the Main on the east has long stood as the dividing line between north and south Germany, and its place in German history is even more important than that of the Ohio in our own. And what is true of the Rhine region is true in a greater or less degree of many other great physical features of the earth's surface, of the Tiber, the Nile, the Seine, the Thames, the Tweed, the Danube, the Alps, the Pyrenees, the Potomac, the Hudson, the Mississippi. If ignorant of the historical relations of such regions, the teacher of geography is not equipped for his task. If ignorant of the geography of such regions, the teacher of history is not prepared to rightly interpret his subject.

A glance at the map of northern Europe shows that most of the great commercial cities are situated, not on the coast as would be expected, but on rivers at some distance inland. Paris, Antwerp, Rotterdam, Amsterdam, Bremen, Hamburg, Lübeck, London, all seem to be poorly located for their purpose, nor does geography suggest any explanation. But if a proper amount of historical information be added to the purely geographical, two very interesting results may be achieved. First, the location of these cities can be explained (in most instances at least) by reference to the necessity of their being placed out of the reach of the corsairs by whom the open sea was infested in early mediæval times and in this connection, the story of the Norsemen and their settlements in various parts of Europe, particularly in England and Normandy, can be introduced and the importance of the movement enforced. In the second place, in calling attention to the fact that most of these towns now have a port directly on the sea, it is easy to illustrate the great revolution that has been wrought in commerce and navigation since the time when it was possible for the largest known ships to sail upon ordinary rivers, and to emphasize the size and draft of the great steamships of the present.

Every boy and girl soon reads about Venice, the queen of the Adriatic, situated upon the very bosom of the sea. The interest attaching to the geographical aspect of the city is broadened and deepened when the circumstances of its founding are connected with its position. In the wild tumults of the barbarian migrations and especially during the invasion of Attila, the Hun, the fugitives from around the head of the Adriatic fled to these islands and there built a city which grew into a great metropolis free from the terrors of invasion.

Although history and geography are generally divorced in teaching, yet, strangely, historico-political boundaries are the ones most generally used as the basis of work in geography. This is not necessarily bad, since it leaves the way open for suggestions upon the meaning of such boundaries. But political boundaries in geographical work should be subordinated to the larger physical divisions which mark off great geographical unities. These unities will often be found to coincide in form with historical unities, but wherever they do not, it is the task of history and not of geography to explain such deviation. Why are there two separate states in the Iberian peninsula? Why does France not extend to the Rhine on the east? Why is Rhode Island not a part of Massachusetts or Connecticut? Why was West Virginia separated from old Virginia? Why was Texas left as one big state instead of being divided up into several?

For the purpose of a study of continents on the lines suggested it is better to divide them into large natural regions and work out thence to the details both of physical and political subdivisions. Thus Europe has been divided by Lavallee into the Spanish region, including the whole peninsula; the French region, extending to the Alps and the Rhine; the German region, comprising the great river basins north of the Alps and Carpathians; the Italian region; the Greek region including the Balkan peninsula and adjacent islands; the British region, Scandinavian region and the Russian region. On this basis Lavallee proceeds to study the political units included in each physical division, pointing out the instances where the political boundary does not follow the natural boundary. What he does not do, however, but what might advantageously be done to a reasonable extent, is to explain the significance of this variation. In the work of the earlier grades this could not be carried far, but if it be kept constantly in mind much will be gained in clearness.

Some of such method applied to the geography of the United States would make clear much that is ordinarily left dark or taken on faith. The United States may be divided roughly into the three primary regions, the watershed of the Atlantic, the watershed of the Gulf of Mexico and the watershed of the Pacific. Each of these has had some sort of historical unity, as each has to-day some sort of economic unity, although it must be said that the institution of slavery and its consequences have tended to bring together the southern parts of the first two regions in opposition to the more northerly parts. But it is nevertheless true that our history has expanded thus by regions rather than by artificial sections such as the geographical text-books generally mention. The first phase of our history was, very naturally, mostly confined within the narrow region between the Alleghanies and the sea, and the states of this region had a solidarity of interest that has not even yet entirely vanished. Jamestown, Plymouth, Salem, New Amsterdam, Philadelphia, Savannah, were all in the same region and their early history had a unity that was not shared with that of Quebec or New Orleans.

In attempting to study the second phase of our natural expansion we are confronted with nothing approaching in importance the purchase of Louisiana. Why did the states along the upper Mississippi demand the acquisition of New Orleans, threatening secession and forcible seizure if the demand were not acceded to? Because upon the possession of the Mississippi for unimpeded navigation was supposed to rest their future commercial prosperity. Here again is offered the opportunity of studying in connection the commercial geography of this region, the great change which has come about during the present century in methods of commercial intercourse. The great river with its tributaries has ceased to be the all-essential artery of trade that it was in 1803 or still later, when a part of even our Indiana export trade was carried on by means of the flat boats that floated down our rivers to the great emporium, New Orleans. The railroad has changed all that. But any study of this large central region will hardly be an adequate one, whether it call itself historical or geographical, unless it involve the relation of the Mississippi to our earlier conditions and an explanation of the manner in which that relation has been modified.

APRIL, ANNIVERSARIES.

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LENORA NEWLIN HOBBS, BLOOMINGDALE, INDIANA.

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April brings many patriotic lessons and affords opportunity for a number of pleasant observances that would do much toward giving pupils a better understanding of our nation's history, besides offering a delightful variety in the routine work of the school-room.

Perhaps few are aware how many of America's noted men began or ended their lives in this month. Thomas Jefferson was born on April 2, 1743. Prof. Samuel B. Morse, artist and inventor, was born April 27, 1791, and died April 2, 1872. On April 3, 1783, Washington Irving was born. The death of Wm. H. Harrison occurred April 4, 1841. April 11, 1873, General Canby was murdered by Captain Jack, the Modoc chieftain. On April 12, 1777, Henry Clay was born. On April 13, 1894, occurred the death of David Dudley Field. April 15, 1865, the death of Lincoln. On April 27, 1822, U. S. Grant was born. On April 27, 1822, Ralph Waldo Emerson died.

The class in history could well afford to give one day's recitation to the life of Jefferson as a prelude to the study of the Constitution of the United States. A "Morse" day, in which not the life of the man, but the story of the telegraph and the early experiments in sub-marine cables were reviewed, would be full of interest. While pupils hear much of Lincoln and Grant, yet there is ample material for which to arrange an hour's exercise that would be new and instructive. A glimpse of compromises and congressional life would be gained in a study of Henry Clay, the "Great Pacificator." The class in literature would find special lessons on Irving and Emerson profitable.

In the record of our nation the month of April holds an important place. The first president of the United States was inaugurated April 30, 1789. John Tyler was inaugurated president April 5, 1841. The opening hostilities of the Revolution, the battle at Lexington and Concord took place April 19, 1775. On April 21, 1836 was fought the battle of San Jacinto, in Texas. With the fall of Ft. Sumter, April 14, 1861, began the Civil war; the first blood was shed in the riot at Baltimore, April 19, 1861. On April 6, and 7, '62 occurred the battle of Shiloh. On



April 25, 1862, New Orleans was captured. Petersburg after a siege of nine months, surrendered to Grant, April 2, '65. The Union army entered Richmond, April 3, '65. On April 9, Lee surrendered to Grant. On April 14, '65, General Anderson again hoisted above Ft. Sumter the very flag which had been hauled down four years previous.

The first American newspaper, the Boston News Letter was published April 24, 1704. The terms of the Louisiana Purchase were concluded on April 30, 1803. In a meeting of ex-soldiers at Decatur, Ill., April 6, 1869, a society was planned to perpetuate the memories of the war. The first regular convention was held in the following autumn at Indianapolis, where was completed the organization of the G. A. R. On April 22, 1889, Oklahoma was opened to settlers. On April 18, 1890, the Pan American Congress closed.

Though there is no national holiday in this month, yet we note several State holidays. The State election in Rhode Island occurs on the first Wednesday in April. Three of the southern states observe Decoration Day in April; Louisiana on the 6, while Georgia and Alabama have appointed the 26 as Memorial Day. April 22, is Arbor-day in Nebraska.

Three years ago the legislature of Massachusetts abolished that old New England custom, the observance of Fast Day as a legal holiday, and put in its place Patriot's Day, the anniversary of the battle of Lexington. On April 19, 1894 while Coxey's common-weal army was marching on to Washington, Massachusetts celebrated the first Patriot's Day. Much preparation was made. There was something for all classes. Patriotic exercises and historic meetings for thoughtful people, were held on the evening of the 18th. Enthusiasm began with the placing of the two historic lanterns in the tower of the old North Church, in Boston, and it fairly ran wild when a young man mounted on a black horse, a modern Paul Revere, set out for Lexington and Concord. At sunrise all through Massachusetts was heard the firing of cannon and ringing of bells. While there were many celebrations in different parts of the State, yet the chief interest centered in the twin towns of the Revolution, Lexington and Concord, and the historic ground over which the British retreated in 1775. A sham battle between the Red-coats and the Minutemen at Concord bridge was the great feature of the day. Thus

Patriot's Day was inaugurated. It is like no other holiday, and most of all it is unlike the Fast Day which it superseded. The celebration in itself is nothing, it is the principle for which the day stands that makes it potent. This year at midnight on the night of the 18th of April the chimes in the old North Church will again peal out the notes of freedom, and at sunrise on the 19, will be heard the boom of the cannon. Mills and factories, shops and offices, will be closed, and old and young will have opportunity to review events which are among the richest treasures of American citizenship. Many will visit the old battle-field at Concord, where

" By the rude bridge that arches the flood,  
Their flag to April's breeze unfurled.  
Here once the embattled farmer stood,  
And fired the shot heard round the world."

April 21, San Jacinto Anniversary, is a holiday in Texas. San Jacinto is to Texas, what Lexington is to Massachusetts. The massacre of the Alamo, a massacre almost without a parallel in modern warfare, turned the tide of Texan independence. Seven weeks later while those sickening horrors were yet fresh in mind, Gen. Houston and seven hundred patriots with the battle-cry "Remember the Alamo," rushed upon the Mexicans at San Jacinto. Santa Anna's one thousand five hundred men were either killed or made prisoners. Santa Anna himself fled but was afterwards captured.

In the Alamo and San Jacinto we find patriotism as unflinching as at Lexington and Bunker Hill. All New England will feel the impetus of Patriot's Day, on April 19, and two days later, far away Texas will throb with patriotic loyalty, as the anniversary of San Jacinto is observed. While the heroism of Massachusetts and Texas is a rich heritage to their own citizens, yet the glory of them both belongs to every American. Pupils should be taught the real meaning of Patriot's Day and San Jacinto anniversary. They must not imagine that population or prosperity, vast areas of territory or material wealth will make our nation great, unless each citizen strives day by day, to make himself worthy of such a country. Let not our patriotism become foolish vanity. When all the coming citizens feel that *living* for our country is higher and nobler as well as more useful than dying for it, then we need not fear the enemy at the gate.

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THE TEACHER A TRAINER OF CITIZENS.

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CHARLES A. McMURRY.

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In the recent meeting of superintendents at Indianapolis the Herbart Round Table discussed "Training for Citizenship."

The value of such papers and discussions for teachers in the ungraded schools has been questioned and deserves notice.

It is natural that topics like this should be first discussed by university and high school teachers who are especially interested in the teaching of such subjects. It is from such teachers that we may expect a broader and fuller knowledge of this field and helpful suggestions as to the main topics deserving treatment in more elementary schools.

It is certain that teachers in the elementary and ungraded schools will welcome all the light they can get from specialists in higher schools who can point out useful books and lines of study which will best fit all to teach with intelligence and spirit.

In the history and reading matter of our ungraded schools there is a great opportunity to work out a real improvement in our knowledge of political and social subjects and in the spirit in which we look at such questions. Such improvement must have its beginning and growth in the studies and interests of the teachers.

In such questions we are too narrow and uneducated. We, as teachers, certainly need enlightenment. Any intelligent and clear-headed farmer who reads the papers is apt to have more definite opinions and clearer reasons to offer for them than the local school teachers. But it is a very appropriate thing for even young teachers to take a strong and intelligent interest in public affairs and in social problems.

If our teachers could be so educated that they would be *intelligent* and *fair-minded* in discussing political, social and historical questions, the effect in the education of American citizens would be very strong. Nor does such education of teachers seem impossible although it is only gradually that such results can be brought about with the majority of teachers.

The fact that much of our history teaching is one-sided and partisan is not felt by most of our teachers. We have all grown up in such a favorable opinion of American ideas, wars, statesmen

and success that we are not able to see much good in other governments or much evil in our own. We have a comfortable, patriotic way of admiring most things American and of questioning foreign institutions. It is to be hoped that when we have studied and compared more carefully our own affairs and those of foreign lands, we may still feel that America is best. But we need larger knowledge and intelligence and honesty in facing the truth.

America is beginning to feel now more than ever before the pressure of social and political troubles. Great evils in legislatures, in city governments and in the ignorance and vice of large numbers of our population are now severely felt and every school teacher ought to be a thoughtful student of these problems, first as an intelligent voter and citizen, and, what is more important, because of his influence as an educator.

Will this lead to more politics in education? More of the right sort and less of the wrong?

There is no class of people who need to cultivate more conscientiously a fair-minded, impartial intelligence on all public questions. It is harder to acquire a reasonable, judicial spirit than it is to acquire information. Even learned men often show one-sidedness and strong partisan bias. Knowledge alone will not make us good voters or good citizens. But knowledge, tempered with reasonableness and well-balanced judgments will make every teacher a valuable and weighty citizen.

Apply this to the United States history as you teach it in the schools. Nearly every important subject treated in our history was a double-sided problem, calling not simply for facts, but also for thoughtful weighing of evidence to reach a conclusion. Was Jefferson justified in purchasing Louisiana? Give the argument on both sides and weigh out the result. To what extent were the Puritans justified in their treatment of other sects? The spirit of candor can be easily cultivated in the study of such questions of which our history is full. With older boys and girls in our ungraded schools the wish to think out some of our problems during the constitutional period and in present society is active. Teach them at least to think out both sides of their problem. The spirit of debate, the desire to overcome an opponent is by no means the best spirit to cultivate in schools. But let the teacher give an example of reasonableness, of willingness to gather up

and consider the facts on all sides. We shall not settle many great problems in the school-room ; that is the duty of older, more experienced people ; but we may learn how to approach important questions. We may acquire industry in collecting facts and self-control in reserving our judgment till the evidence is all in and carefully considered.

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## **PRIMARY DEPARTMENT.**

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the  
Anderson Schools.*

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### **SOME GLIMPSES IN SOUTHERN SCHOOLS.**

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It has been my pleasant experience during the past month to visit several schools in Louisiana and Texas. To me the visit was very helpful both from the similarity and unlikeness of those schools to our own.

In one city I found the idea of departmental work carried down from the high school through the 8th, 7th, 6th and 5th grades. There is a special teacher for each subject (or nearly each subject), just the same as in the high school itself. There is a large assembly room in each building that seats three or four hundred children, and they pass from this room to class rooms for recitation.

In this way the teacher has three or four hundred different children each day and some of the difficulties are obvious at a glance. Pupils in the 5th and 6th grades, especially, are still children and need some one person who takes a deep interest in all they do ; who is ready to hear many of their personal experiences ; some one to be a confidante in many affairs. This these children did not have.

Then there seems no one especially responsible for the pupils' behavior or even ordinary politeness. The teachers and pupils are very nearly unacquainted—many of the teachers knew but few of the children's names.

Unless the teachers are exceptionally earnest in consulting with each other as to the work they are doing, each subject is entirely isolated and in no way relates to their other work. As is frequently the case in departmental work, each teacher is especially anxious that just so much of her work be done regardless of

what the other teachers are requiring. In some cases, the children had to study several hours every evening to be ready with all the work.

In one other system of schools I found that the departmental work below the eighth grade had been abandoned. The Superintendent said that it was almost impossible to locate responsibility under this system.

The primary reading work which I saw lacked the close vital touch of the children with some particular object of interest either in nature or literature which we find in our best schools in Indiana. In many cases the work was almost entirely confined to the merest rote work in the text books.

In some places the Grube method of teaching number was followed closely, while in others the old manner of making addition, subtraction, multiplication and division tables which many of us did in the little old frame district school house in Indiana years and years ago, was rigidly followed. I found this number work in some cases in its most rigorous form applied to the very first grade of school, but found that at the fifth year the pupils were doing just about the work that fifth grade pupils in our schools do that have very little distinct number work for the first year.

One other peculiarity in the history work that I found in the schools visited in both Texas and Louisiana was that from one to two years of the history period is devoted to the study of the state history. The text book for the history of Texas used in the schools is nearly as large as Montgomery's outlines which we use in Indiana. But I also found in one system of schools that a part of the preliminary regular history work is based upon Jane Andrew's "Ten Boys On the Road From Long Ago Till Now."

One peculiarity of the hours of all the schools visited was noticeable. They begin at 9:00 and run till 12:00 having one half hour intermission at this time for lunch, beginning at 12:30 and closing at 2:30. The only change I saw in this was that in some schools the lunch hour was from 12:30 to 1:00. In this way the children all (with very few exceptions) bring their lunch to the school, and after the short period of exercise following the lunch the school work is resumed. In no school ground was there a sign to keep off the grass. Every school ground that I saw seemed to be given over to the exclusive use of the children. Besides this in some of the schools systematic physical exercise is

provided for on the official program and in some places occurs as often as three or four times a day beside the regular fifteen minute intermission in the forenoon session.

One other peculiarity of some of the largest schools was that the children are required to carry all their books home with them at night and back the next morning for fear of their being taken if left in the school building. In one school building I noticed that each child had a locker to which he carried a key, and in which he kept his wraps. In speaking of this the superintendent said that nothing was safe unless under lock and key. I compared it with our own open school buildings and open cloak rooms through which all the children of any one room pass. It seemed to me rather a serious reflection upon any community, and I wondered if it wasn't an undue cautionary measure. The day on which I visited this school, the rain was pouring down and I left my over-shoes and umbrella standing in a corner of the hall. When I wanted to leave at noon my umbrella and over-shoes were nowhere to be found, and I was forced to walk to the station through the driving rain without them. The superintendent said that he would make inquiries when the pupils came back after the noon period and if he found the missing articles before time for my train to leave he would send them to the station. A few minutes before train time a boy came into the station with my overshoes and umbrella, saying that one of the teachers had worn them home. So when I saw that even the teachers seemed to think nothing whatever of taking articles that belonged to strangers if they wished to use them, I was not surprised that lockers were necessary. I may also add in this connection that there was a sign painted across the floor at the front end of the porch which said, "No admittance except on business."

In some schools it was almost impossible to see any of the regular school work because of the fact that the teacher seemed to feel under obligations to entertain the visitor, and in many cases I insisted again and again that the teacher go on with her regular work as I should like very much to see what she was doing. In one case I remember (a third grade) the teacher told me several times that they weren't doing anything of very much account except a little drill work on the tables, and she would so much rather I should tell the children a story instead. In nearly every case in this particular system of schools the work was entirely stopped

and often the children's attention was directed to me as a "lady from Indiana, look at her." This happened frequently when the principal went with me into a room. The children were all required to stop work and take a good look at the visitor. The teachers seemed to feel that it was a social matter and that it would be discourtesy to the visitor if they did any kind of school work while she was present. But through the most careful insistence on my part I was able to see at least snatches of a great deal of their work.

One peculiarity of this, almost the largest system of schools in the South, was the official program which I found in every room. It had as the first period in every grade in the school, "9:05 to 10:00 arithmetic, and from 11:05 to 12:00 reading." The writing and spelling were shorter periods, but it was very different indeed from our Indiana notion that a program for the little first grade children should be exactly the same as for the eighth grade. The teacher was allowed some liberty in the manner of the employment of this hour. Some of them had the entire hour for recitation, and required the children to make all their preparation at home the evening before; others used a part of the period for preparation and a part for recitation. I asked a first grade teacher at what time I could see her reading work and she told me she had her reading recitation from 11:05 to 12:00.

I found no schools in Texas in which the boys and girls were in different buildings, but in New Orleans there are only three buildings out of the sixty in which both sexes attend the same school. One of the teachers in the boys' school that I visited said to me that she thought it was "perfectly dreadful" for boys and girls to attend the same school, and for her part she hoped she might never have to teach a mixed school. I asked one of the teachers if there was any Algebra work in the eighth grade, and she replied "No indeed. I never heard of any school doing Algebra in the eighth grade. Our schools here do absolutely thorough work and we have arithmetic from the first grade through to the high school, and we don't waste any time on Algebra." I may say I found one school in which Algebra was begun in the first part of the eighth grade, having two periods a week given to it and three to arithmetic, and in the latter half of the eighth year the entire five periods are given to Algebra. This I found in San Antonio, Texas.



The idea of physical exercise which I saw in so many places and the fact that the schools are dismissed at 2:30 in the afternoon, thus giving the family an opportunity of having work done by the children which might otherwise necessitate their missing school, seemed to me features of school economy that are worth considering. Recesses such as we frequently have in our graded schools that are only recesses in name and not in fact, might almost as well come at the end of the session and the pupils allowed to go home. Then, too, the great attention given to physical exercises and rests, is commendable. In one first grade, particularly, I noticed that after every recitation the teacher told the children they might do anything they wished for a minute or two.

On the whole, I was very glad to get back to our Indiana schools, where, as it seems to me, the rank and file of the teaching profession is in a little closer touch with the child than in the South.

"The child's sob in the silence curses deeper  
Than the strong man in his wrath."

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### ODDS AND ENDS.

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"I am ashamed of the work this class is doing in arithmetic," said a teacher to a visitor in the presence of her school. "They don't seem to try at all. If they did, I'm sure they wouldn't have any trouble." The pupils overheard the remark. They did try, but probably not just as hard as they might have done. The visitor stayed for the recitation and very often she heard this, "You aren't trying to see it;" "You don't try to remember what we have had;" "I get so tired of telling you over and over again the same things." The point was difficult and the visitor wondered how many years it had been since the teacher herself had been familiar with the subject. But the teacher had forgotten if there ever had been a time when the subject was not clear to her and seemed to think the children ought to see it now as readily as she herself saw it.

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"And you are going to hear our arithmetic lesson to-day. Well, we have been working very hard on division for nearly a week. We don't see it very clearly yet, but it is getting easier

for us every day and we are sure we can master it in a few more lessons."

\* \* \* \* \*

Can you see the difference between these two schools? One uses the pronoun, *you*, the other, the pronoun, *we*. One talked *to* the class, the other, *with* them. One discouraged, the other encouraged. One humiliated, the other uplifted and inspired confidence. One *teaches* school, the other does not.

There are entire rooms of children in which there are not more than two or three really slow or disagreeable children and forty or forty-five, fine, spirited little people who always try to do exactly the thing they know is wanted to be done. Now, what does this teacher frequently do? She worries and frets and fumes and scolds about her school; the children are so slow, so dull, disagreeable or disobedient. Whenever anybody asks about her school, she immediately makes it a special point to tell how trying her pupils are, how slow some of them are in their work. She dwells at such a length on the shortcomings of these two or three that people soon come to think the children of this school or of this particular town must be doing poor work. This teacher has given all this impression herself. She has let two or three poor or bad pupils overshadow the forty good ones.

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### APPROACHES TO LITERATURE.

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There are three approaches to literature :

1. Go over it with the single purpose of raising in the mind of the child the question, "Is this right? Is it correct?"

2. Go over it and have him point out to himself and you the things that are admirably said. Let him feel the difference between *saying a thing* and *saying it well*.

Forgetting grammatical aspect and beautiful setting, lead him back to ask, "Is this a true thing? Can I live it? If I live it, can I live better?" When you touch a child on the side of the beautiful, you have touched him for good.

When a child reads a piece of literature, we are too impatient to have him give it back to us and tell us what he has read.

Often the impression is as yet too fine and elusive to put into words. In an art gallery an impatient gazer asked a friend who was studying a picture, "Well, what do you think of it?"

Without moving his eyes, the art lover said, "I'll tell you when I get ready!"

Any teacher who will drag from a child, before he is ready, his impressions of a piece of literature does the pupil a violence.

When we give to a child the best in our language, we need not fear the result; it will work itself out in high thinking and noble living. The child will grow into a living realization of the legend:

"In the midst of the beautiful is the good,  
In the midst of the good is God, the Eternal One."

—*President Brumbaugh, Juniata College.*

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## LEND A HAND.

(*This department is conducted by Mrs. E. E. Olcott.*)

*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

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### FOR THE GEOGRAPHY CLASS—ROBINSON CRUSOE'S ISLAND.

No matter what map the class may be studying, an occasional recitation may be profitably spent in a special lesson such as is here suggested. The purpose is to impart a vividness to map study by giving interesting incidents connected with various places. Teachers would do well to treasure such geographical anecdotes and bits of information as come to hand from newspapers, magazines and books. In one sense, the more remote the spot, the better, since it causes the child's thought to move in larger circles, makes him feel the more that he is a citizen of the world because of his knowledge of far away places. The value of pictures in this connection can hardly be over-estimated.

JUAN FERNANDEZ.

Turn to the map of South America and find the island of Juan Fernandez. It is Robinson Crusoe's Island—the very spot where he lived so long.

Robinson Crusoe's real name was Alexander Selkirk, and his home was in Scotland. He was mate on the ship *Cinque Port* in 1704. In those days, captains occasionally marooned disobedient sailors, that is, put them ashore on some lonely island and left them to shift for themselves.

During one of his voyages, the captain of the Cinque Port had marooned several of his men on the island of Juan Fernandez, and four years later in 1704, he landed there again to rescue those men if they were still alive.

Alexander Selkirk, the mate, had a quarrel with the captain and said—so the story goes—that he would rather be marooned himself than finish the voyage under such a commander. So the captain took him at his word, and left him there all alone. No other vessel came for more than four years. Then a ship took him to England.

He had kept a diary, and years afterward it came into the possession of an English author named Daniel Defoe and he used it for the foundation of a story, and called the hero Robinson Crusoe. Some say that Defoe did not have Selkirk's diary, but only heard from others the story of his life on the lonely island. But, at any rate, we know that Alexander Selkirk was the hero and Juan Fernandez, the island. Juan Fernandez is of volcanic origin, and its highest peak which rises about three thousand feet above the sea, is called Alexander Selkirk's Lookout. Here in plain sight of the harbor is a memorial stone which is inscribed as follows :

IN MEMORY  
OF  
ALEXANDER SELKIRK,  
MARINER.

A native of Largo, in the county of Fife, Scotland, who was on this island in complete solitude for four years and four months. He was landed from the Cinque Port, ninety-six tons, sixteen guns, 1704 A. D., and was taken off in the Duke privateer, 12th February, 1709. He died lieutenant of the Weymouth in 1723 A. D., aged 47 years. This tablet is erected near Selkirk's Lookout by Commodore Powell and officers of H. M. S. Topaze, 1868 A. D.

Some years ago there was talk of unveiling a statue of Robinson Crusoe in Alexander Selkirk's native town in Scotland. I do not know whether or not the plan was carried out.

Last fall a Spanish captain said that from the deck of his vessel he saw the island of Juan Fernandez disappear as if an earthquake had caused it to sink in the ocean. An English captain reported that no trace of the island was left and the master of a sailing vessel further verified the report by saying his vessel sailed over the spot where once Robinson Crusoe's island offered its friendly harbor to storm tossed ships.

It will never be known whether the sensational report was a "Sailor's Yarn" or the captains were mistaken as to their whereabouts when they looked for Crusoe's island, but the truth is the story was utterly false. Other ships have since found the island in the exact spot where it has always been, and bearing no signs of having been submerged in the ocean.

Juan Fernandez takes its name from the Spaniard who discovered it near the close of the sixteenth century. Spain gave it to him. He lived there for a time and stocked the island with goats, but finally grew weary of the loneliness and left the goats in full possession. For a hundred years the island was a favorite resort of pirates. History does not say when Chili gained a title to the island, but it records that three hundred Chilian convicts and one hundred soldiers occupied the island in 1820. Goats, pigs, sheep, cattle and wild horses, presumably first brought there by pirates roamed over the little island, which is only thirteen miles long and four wide. It has a fine climate, its small fertile valleys yield an abundance of fruit and vegetables. No troops nor convicts are now maintained on Juan Fernandez, for Chili has virtually abandoned it since 1835, when it was visited by a severe earthquake.

It is four hundred miles from the coast of Chili, so the cannibals, who, in Defoe's story, came to Crusoe's island to feast on their captives were not from the mainland. They probably brought Robinson Crusoe's man Friday from a neighboring island. Perhaps the Spaniards who were living with Friday's native tribe, and whose arrival Robinson Crusoe was expecting when the English ship came, were marooned men.

There is talk of changing the name of the island, and it may be that in a few years Juan Fernandez will disappear from the map, and in its stead we shall find the name Robinson Crusoe's island.

#### QUESTIONS.

1. Give the latitude and longitude of Juan Fernandez.
2. To what country does it belong?
3. How far is it from the mainland?
4. What have you learned of its climate and products?
5. What is its area?
6. What is its origin?
7. What is its highest peak called?
8. Who was Alexander Selkirk?

9. How did he happen to be on this island?
10. When and how long did he live there?
11. Of what book is Selkirk the hero?
12. Who is its author?
13. When and by whom was a tablet erected on the island?
14. What was reported to be the fate of the island in November, 1896?
15. For whom is the island now named?
16. To what may the name be changed?

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### DESK-WORK—CUT-UP CALENDARS.

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A judicious amount of abstract number work has a legitimate place in the primary grades. Variety in presenting the problems not only sustains the interest but increases the effectiveness of the drill. A child, who for the moment, is weary of recording with his pencil that  $3 + 6 = 9$ , may really enjoy searching among a number of "cut-out" figures, finding, and arranging correctly the printed 3, 6, and 9.

Most excellent number-builders, which meet just this need, are sold by several school supply houses. But many teachers who would gladly use them are debarred by the expense of providing individual pupils with builders. Such teachers may be glad of the following detailed suggestions for providing the class with home-made number-builders.

A set containing thirteen each of the figures 1, 2, and 3, and nine each of the succeeding figures to 10 inclusive, making a total of 102 figures, make a satisfactory number-builder. Three "leaves" of a calendar, *i. e.*, the record of three months will furnish the required number of figures. Because each month having 31 days, will, when the tens are separated from the units, give two 0's thirteen each of 1's and 2's, five 3's, three each of the succeeding figures to 9 inclusive, and one 10. The two 0's pasted beside two 1's furnish two extra 10's. So any three "leaves" of a calendar will give nine each of the figures from 4 to 10 inclusive. The figure 3 appears fifty-four times upon a year's calendar; this gives an average of a fraction over thirteen furnished by each three "leaves." Thirteen each of 1's and 2's will be sufficient, and it will be convenient, when sorting figures, to have

the same number of 1's, 2's and 3's. so the extra 1's and 2's may be thrown aside.

If the four fundamental operations are to be shown by the pupils, the signs  $+$ ,  $-$ ,  $\times$ ,  $\div$  and  $=$  must be made with pen or pencil. Twenty of each will serve very well, the total, 100 signs and 102 figures make 202 pieces in each set. However, if only addition and subtraction problems are shown, the signs may be dispensed with by placing the figures in columns, and using a narrow, short strip of cardboard, or piece of toothpick to represent the horizontal line which separates a sum or difference from the numbers producing it, as :

For durability and convenience in handling, it is well to paste each leaf of the calendar on tough, heavy paper or light-weight cardboard before cutting out the figures.

Second and third grade pupils can, with a little instruction, cut up the calendars,\* and where there are several grades in the room, will enjoy making the number-builders for the first grade. Let the teacher write on the blackboard; "Cut out thirteen each of 1, 2 and 3, and nine each of 4, 5, 6, 7, 8, 9, and 10," and give three leaves of a calendar to each trusty pupil who has brought a pair of scissors, and see with what skill and pleasure the cutting is done. A deft-handed, light-footed pupil may be commissioned to collect the necessary 1's and 0's and paste them to make 10's. The narrow strips of cardboard may be cut to do duty as horizontal lines, and lo! the number-builders are complete and have not cost a penny, unless it be a few cents for cardboard. At another period, the pupils may cut small pieces of cardboard corresponding in size to the figures and write upon them the signs  $+$ ,  $-$ , etc.

Besides the innumerable problems which may be given promiscuously, the second grade should thoroughly review, and the first grade should discover and record the following twenty-five problems in addition :

(1)	(2)	(3)	(4)	(5)	(6)
1	1	1 2	1 2	1 2 3	1 2 3
1	2	3 2	4 3	5 4 3	6 5 4
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
2	3	4 4	5 5	6 6 6	7 7 7

(7)				(8)				(9)				
1	2	3	4	1	2	3	4	1	2	3	4	5
7	6	5	4	8	7	6	5	9	8	7	6	5
—	—	—	—	—	—	—	—	—	—	—	—	—
8	8	8	8	9	9	9	9	10	10	10	10	10

The first grade shall make the discovery by using objects—as shoe pegs—and the investigation may be conducted thus :

Provide each child with a small quantity of shoe pegs. Direct each to take two pegs from his supply.

REQUEST : “ Place your two pegs in two ‘groups,’ and tell a story about it.”

REPLY : “ One peg and one peg are two pegs,  $1 + 1 = 2$ .”

QUESTION : “ Can you make any other groups than one and one?”

DISCOVERY :  $1 + 1 = 2$  is the only “two-group” story that can be told about the number two.

The pupils then take three pegs and, in the same way, find that  $1 + 2 = 3$  is the only “two-group” story about that number.

Then with four pegs, they discover that there are two ways of arranging the pegs in two groups, viz.  $1 + 3$ , and  $2 + 2$ , so there are “two-group” stories about the number four. Finally, when they have tested each number to ten in this way, they are ready to record the discoveries again, without the personal supervision of the teacher.

The second grade should have had sufficient concrete work and be mentally strong enough to readily perform the work required in such a series of problems as :

Show with figures all of the “two-group” addition stories about each number from 2 to 10.

The twenty-five addition problems are the basis of forty-one subtraction problems.

(1)	(2)	(3)	(4)	(5)
2	3 3	$\overbrace{4\ 4}$ 4	$\overbrace{5\ 5}$ $\overbrace{5\ 5}$	$\overbrace{6\ 6}$ $\overbrace{6\ 6}$ 6
1	1 2	1 3 2	1 4 2 3	1 5 2 4 3
—	— —	— — —	— — — —	— — — — —
1	2 1	3 1 2	4 1 3 2	5 1 4 2 3



(6)				(7)				
$\overline{7\ 7}$	$\overline{7\ 7}$	$\overline{7\ 7}$		$\overline{8\ 8}$	$\overline{8\ 8}$	$\overline{8\ 8}$	$\overline{8\ 8}$	8
$\overline{1\ 6}$	$\overline{2\ 5}$	$\overline{3\ 4}$		$\overline{1\ 7}$	$\overline{2\ 6}$	$\overline{3\ 5}$	$\overline{4\ 3}$	4
$\overline{6\ 1}$	$\overline{5\ 2}$	$\overline{4\ 3}$						
(8)				(9)				
$\overline{9\ 9}$	$\overline{9\ 9}$	$\overline{9\ 9}$	$\overline{9\ 9}$	$\overline{10\ 10}$	$\overline{10\ 10}$	$\overline{10\ 10}$	$\overline{10\ 10}$	$\overline{10\ 10}$
$\overline{1\ 8}$	$\overline{2\ 7}$	$\overline{3\ 6}$	$\overline{4\ 5}$	$\overline{1\ 9}$	$\overline{2\ 8}$	$\overline{3\ 7}$	$\overline{4\ 6}$	$\overline{5\ 4}$
$\overline{8\ 1}$	$\overline{7\ 2}$	$\overline{6\ 3}$	$\overline{5\ 4}$	$\overline{9\ 1}$	$\overline{8\ 2}$	$\overline{7\ 3}$	$\overline{6\ 4}$	$\overline{5\ 3}$

### THE NEW COMPULSORY EDUCATION LAW.

SECTION 1. *Be it enacted by the General Assembly of the State of Indiana*, That every parent, guardian or other person in the State of Indiana, having control or charge of any child or children between the ages of eight and fourteen years, shall be required to send such child or children to a public, private, or perochial school, or to two or more of these schools, each school year for a period of at least twelve (12) consecutive weeks in each school year: *Provided*, That any and all children that have completed the first eight years of work of the common schools of the State of Indiana and have received certificates of graduation from the common schools shall be exempt from the provisions of this act: *Provided*, That children who are physically or mentally incapacitated for the work of the common schools are exempt from the provisions of this act; but the school authorities shall have the right and duty where such exemption from the provision of this act is claimed by any parent, guardian, custodian or child to cause an examination of such child by a physician or physicians employed for the purpose by such officers and if such physician or physicians hold that such child is capable of doing the work in the common schools, then such child shall not be exempt from the provisions of this act.

SEC. 2. It shall be the duty of the County Supintendent of schools for townships, and of the County Superintendent of schools in a city or town, together with the Secretary of the State Board of Charities and one member of the State Board of Education designated for such purpose by said Board, to appoint one or more truant officers, not exceeding five in number in any county, who shall be assigned to duty by districts composed of townships. The truant officers shall see that the provisions of this act are complied with, and when from personal knowledge, or by report or complaint from any resident of the township or townships under his supervision, he believes that any child subject to the provisions of this act, is habitually absent from school, he shall immediately give written notice to the parent, guardian or custodian of such child, that the attendance of such child at school is re-

quired, and if within five days such parent, guardian or custodian of child does not comply with the provisions of this section, then the truant officer shall make complaint against such parent, guardian or custodian of such child in any court of record, for violation of the provisions of this act, and any such parent, guardian or custodian of child who shall violate the provisions of this act, shall be adjudged guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not less than ten nor more than fifty dollars to which may be added, in the discretion of the Court, imprisonment in the county jail not less than two nor more than ninety days.

SEC. 3. For every city or incorporated town it shall be the duty of the Superintendent of Schools of such city or town, together with the Secretary of the State Board of Charities and one member of the State Board of Education designated for such purpose by the said Board to appoint one or more truant officers for the enforcement of the provisions of this act in such city or incorporated town in the manner and under such penalties as are prescribed by section 2 of this act.

SEC. 4. The truant officers provided for in this act shall receive from the county treasury two dollars for each day of actual service to be paid by the County Treasurer upon warrant drawn by the County Auditor.

SEC. 5. The truant officers provided for by this act shall serve one year from the date of their appointment, unless sooner discharged by the Board which is by this act provided for their appointment.

SEC. 6. All school officers are hereby required to make and furnish all reports that may be required by the Superintendent of Public Instruction or by the Board for the appointment of truant officers with reference to the workings of this act.

SEC. 7. If any parent, guardian or custodian of any child or children is too poor to furnish such child or children with the necessary books and clothing with which to attend school, then the School Trustee of the township, or the Board of School Trustees or Commissioners of the city or incorporated town where such parent, guardian or custodian resides, shall furnish temporary aid for such purpose to such child or children, which aid shall be allowed and paid upon the certificate of said officers by the Board of County Commissioners of said county. Such Township Trustee or Board of School Trustees shall at once make out and file with the Auditor of the county a full list of the children so aided, and the Board of County Commissioners, at their next regular or special meeting, shall investigate such cases and make such provisions for such children as will enable them to continue in school as intended by this act.

SEC. 8. School Commissioners, Trustees and Boards of Trustees, are empowered to maintain either within or without the corporate limits of their corporations a "Parental Home" for incorrigible and truant children. Any child not being over 12 years of age who shall be truant or incorrigible may, with the common consent of the School Trustees or Boards of School Trustees or Commissioners and parent, guardian or person having charge of such child, be compelled to attend such "Parental Home" for an indeterminate time. If the parent, guardian or person having charge of such incorrigible

or truant child shall refuse his consent to the attendance of such incorrigible or truant child at such Parental Home, the Superintendent of Schools, or the Principal Supervisor or teacher of any school, may file complaint in the Circuit or Superior Court of the county, and such court shall have the power, upon hearing of the case, to order the compulsory attendance of such incorrigible or truant in such Parental Home for an indeterminate time not longer than 120 days.

SEC. 9. For the purpose of defraying the increased expenditure necessary for the carrying out of the purpose of this act, Trustees of school townships, Boards of School Trustees or Commissioners of cities and towns and Boards of School Commissioners, are hereby empowered to levy, in addition to all sums heretofore provided by law, any amount of special school revenue not exceeding ten cents on the hundred dollars of taxable property, such taxes to be levied and collected as all other special school revenue.

SEC. 10. If any child live more than two miles from the nearest public school he shall not be subject to the provisions of this act.

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## OFFICIAL DEPARTMENT.

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### WHY THE GENERAL EDUCATION BILL SHOULD HAVE BECOME A LAW.

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The general educational bill, known as Senate Bill No. 59, was prepared by a committee of the State Teachers' Association, appointed December, 1895.

In the preparation of this bill, the committee attempted to strengthen the weak places in our present laws only, basing all changes on the thought that the school exists for the child and not for the teachers and school officials. A careful, unbiased and unprejudiced reading of the bill will convince the reader that it is written in harmony with this statement. The changes would not have been radical in any particular.

The first and paramount thought in the minds of the committee was the improvement of the district schools, through :

1. The provision for township high schools.
2. A minimum school term of six months.
3. Providing educational qualifications for county superintendents and making their work more professional.
4. Placing the estimate of all applicants for teachers' licenses on two distinct bases : viz., (a) *Scholarship*—to be determined by a disinterested party ; (b) *Success*—as shown by actual school-room work observed by the superintendent—and when so estimated, making every license a State license.

5. The schools of towns and cities were to be improved, by requiring qualifications of their superintendents, then making them responsible for the management of the schools and results of teachers.

There are many reasons why this bill should have become a law. Since the adoption of a uniform course of study under our State uniformity of school books, marked improvement has been made in the classification of

pupils in the district schools. This course of study has, so far, provided work for the first eight years of the school life of these pupils. We are now faced with a serious problem—what to do with the thousands of worthy boys and girls just ready to help themselves and to develop rapidly into strong, vigorous citizens. To deprive them of further educational advantages is to violate the law of the State; but to require them to re-enter the grades through which they have gone successfully is not only unlawful but positively harmful to the school organization.

The trustees of towns and townships are compelled, under present laws (sections 4497 and 4499, school law) to furnish high school advantages to all qualified children, on demand of the patrons. Section 4499 makes it the duty of the trustee to furnish the advantages in *every district* in the township if the demand is made, making it very expensive, indeed, if all ask for the high school work. The educational bill provides for this work in three ways, either one of which would be much better and cheaper, as follows:

1. By building a house for high school work in each township.
2. By building joint schools.
3. By the payment of tuition.

In a large majority of the townships of the State, the last provision would have been the one adopted, and, in the main, one that would bring new and vigorous workers into the ranks of both city and town schools. As a State, we do not rank with some of our neighbors in this particular, and the great step to be taken in Indiana now is the establishment of an adequate high school system for the country schools—a system that shall give to every child within her borders a good high school education without regard to his place of residence. In so doing, we will have immensely multiplied his chances of success in life.

As to a minimum school term, the State should make it possible for every child to attend school a certain number of months each year at public expense, and the committee decided on six months as a reasonable term.

Qualifications of county superintendents cannot be questioned. The superintendent is an invaluable officer. In our State, the erection of school buildings, and the purchase of supplies are, in a measure, subject to his judgment. But in the creation of a proper school sentiment, and in the direction of his teachers, he finds his greatest field. The fact that the majority of the pupils in our country schools never go to college, makes an imperative need of some direction in studies so that they can make the most of their opportunities.

The superintendent is often the only person who can see the end from the beginning of the child's education, the attention of the teacher being largely absorbed in the work of a particular grade. To do such work requires some one of a high order of skill, and no one should be appointed to such positions without being required to show ability to perform it. Under the present law, this office has been made a clerical one largely—it needs to be, in fact, what it is in name, and the proposed bill would have made it such.

Something must be done to give the teachers of the district schools assistance in the way of supervision, because a large per cent. of the energy

of both teacher and pupils is now wasted, due to misdirection. A school may be a good school, yet if it never receives a visit from a good superintendent, it must suffer loss. If the coming of the superintendent is hailed like sunshine on a cloudy day, if his presence is an inspiration to more earnest efforts, if he is at all times hailed as a welcome guest, his influence will not go with his farewell at the door. His personality will leave a trace there that can not be estimated. The district schools need the direction of our best men and women and to this accomplishment is educational qualifications of county superintendents trending.

If there were but one reason for a change in examination of teachers, viz., that of better returns for the money expended, the plan proposed by the bill could not be assailed. On account of the very great increase in the number of applicants for teachers' licenses now that no limit of any kind is placed upon these examinations, about one-half the time of the county superintendent is taken in conducting them and grading manuscripts. In this we have clerical work of the severest sort, with no return to the applicants that either inspires them toward higher efforts or assists them in knowing their errors through these examinations. There should be two distinct lines upon which an examination for teachers should be conducted, viz., scholarship and personality, or the estimate of the individual as such. When both are done by the same person, they are blended into but one estimate.

Every teacher should know his standing as a scholar estimated by a disinterested person. His personality should be judged by the one above him in authority and attainments, for the spirit of the teacher is best shown when seen in relation to his work.

Nothing could come to the teachers of Indiana that would more clearly mark the two elements of their worth than the plan of examination proposed by this bill. According to its provisions, every tendency toward favoritism would disappear.

The teacher would then be given the state as his field instead of one county. The bill extended the privileges of the exemption license likewise.

In the matter of cities the bill made it possible for a school board to employ a superintendent for a period of years and to give him a voice in selecting his teachers. He is made responsible for the success of his schools; hence he should also be given some voice in the selection of his teachers. If his opinion be sought when teachers are employed, fewer poor teachers would find way into the schools. The teachers who have the scholarship, and are successful in the school room will hail the day when they shall be placed under supervision measured by tests similar to their own at least, and they will follow such directions much more devotedly, knowing them to be thoughts of competent persons. Children will catch the spirit of their superiors and will not rest satisfied till similar attainments are reached.

DAVID M. GRETING.

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#### SURPLUS DOG TAX.

DEAR SIR :—We have before us this morning your letter of March 20, in which you make inquiry about the surplus dog fund as per section 4487 of

the school law. You will find the decision of the Supreme Court touching the disposition of this fund given in 142 Ind. page 668, which overrules a former decision on the same subject known as the City of South Bend vs. Jaquith, Trustee. The Court in the above entitled case uses the following language :

"The custody of this fund is in the hands of the township trustee ; but he must account to each school town and school city within his township for its proportional share of the fund. In case a city or town should be situated, in part, in two or more townships, the distribution must be made in like manner by the trustee of each township, in proportion to the school children of each corporation, living in each of such townships. Any other interpretation of the statute would not only be inequitable, but also in violation of the letter and spirit of the constitution."

It is the duty then of the township trustee to distribute to each school corporation within his township, including his own, their pro rata share of the surplus dog tax fund in his hands in proportion to the school population in each. The School Board of your town should make a demand on the township trustee for this distribution and when paid over by him should issue a receipt for the amount received, which shall be the trustee's evidence before the county commissioners for the disposition of this part of the fund.

Yours very truly,

D. M. GEETING.

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## EDITORIAL.

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### SCHOOL LEGISLATION.

Last month the JOURNAL stated that little or no school legislation was probable. The compulsory law printed on another page was the only law enacted by the last legislature that affects the schools in any general way.

The general education bill, commonly referred to as the Geeting Bill was amended and finally killed. On another page Mr. Geeting gives his reasons why the bill should have become a law. Most readers of the JOURNAL will heartily agree with Mr. Geeting in his argument and in his conclusions. But the objection to the bill was largely on account of what it did not contain. The non-state college men, who united in opposing the bill, unless it could be amended, did it on the ground that it enlarged the power of the State Board of Education, which they contend is organized in the special interest of the State Colleges.

The non-state college men united in a long statement, printed in the papers which concludes with the following paragraph :

"To the general features of the Geeting bill the non-state colleges have offered no opposition. Our contention from the first has been that in order to provide against the abuse of the greatly enlarged powers which it proposes to vest in the State Board of Education the State Board should be divorced from any official connection with the State institutions before the bill becomes a law. With such a reorganization of the board guaranteed to them

the non-state colleges have pledged their hearty support to the Geeting bill, leaving wholly untouched the question as to whether all the provisions are wise or not. Any argument to show that the non-state colleges are willing to defeat the bill, rather than have the board remain unchanged, goes quite as clearly to say the least, to prove that the friends of the bill are ready to see it defeated rather than to surrender the prerogatives which it guarantees to the State university, Purdue and the State Normal."

There is no doubt that the bill would have become a law had it not been for the united opposition of the non-state college men and there is no doubt the bill would have become a law had its friends agreed to the reorganization of the State Board excluding from it all persons connected with the State colleges.

The Bill proposing to divide the present income of the State Normal and establish another normal school in the eastern part of the state failed in the House, where it originated.

The following new laws have relations to the school system and affect it either directly or indirectly :

A law was passed making it unlawful to sell or give cigarettes, cigarette wrappers, or any substitute for same to minors.

Another law makes it illegal to employ boys and girls under eighteen and sixteen years of age respectively in manufacturing establishments.

Towns having a population of less than 1,500 are authorized to refuse to elect school trustees, and place their schools under the management of the township trustee.

The time for the next township election is fixed for Nov. 1900 which has the effect to extend about fifteen months the official term of the present township trustees.

An act authorizing counties, cities, towns and townships to make donations to educational institutions became a law.

Orphan Asylum children are provided for in a much better way than ever before.

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### COMPULSORY EDUCATION LAW.

On another page will be found the full text of the Compulsory Education law. Indiana is one of the latest of the states to enact such a law and therefore has been able to profit from the experience of other states along this line.

Experience has taught that compulsory laws have frequently failed and generally on account of two things, viz : (1.) on account of politics. If the law is strictly enforced it will be unpopular with certain classes and so politicians will not enforce it ; and (2.) for lack of a special officer whose duty it is to enforce the law and to see to it that the children are in the schools. Both these points are guarded in the law. The truant officer is provided for and he is not appointed by and therefore not answerable to the politicians.

Another excellent feature of this bill is the " Parental Home," This is simply an ungraded school to which incorrigible children are sent and kept

till they are willing to attend the regular school and behave themselves. This school is not only for truants but for those who cannot be controlled when in school. This school will have a wholesome influence over that class of boys who are deliberately *bad* both on the play-ground and in the school room. When they understand that they must behave themselves or be "shut up" in this special school, not many of them will persist in their bad conduct.

The weak part of the law is that it requires only twelve weeks of school attendance, each year. It should have been for the full school year, so that this class of children could have kept in their classes and thus got the full benefit of the time spent in school. As it is, much time will be lost because these children can never be classified to advantage. The law was written right in the first place but amended (?). But Indiana has made a good beginning and the law can be modified in the future.

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#### STATE SUPERINTENDENT D. M. GEETING.

Superintendent Geeting closed his first term of office March 15, and has entered upon his second term. That Mr. Geeting has been active and efficient in the discharge of his duties goes without saying. He has done more traveling and visiting schools than any of his predecessors in office. He has done what no other superintendent has accomplished; viz: he has within his first term of office visited *every county in the State*, as the law contemplates. He has in the two years attended *seventy-four* county institutes and has attended associations in seven other counties; so that he has met the teachers in eighty-one counties. The other counties he has visited officially. This is an unprecedented record.

What Mr. Geeting has done and is doing toward bringing high school privileges to every child in the State, deserves special mention. If he should do nothing else, this alone will make conspicuous his administration. He will retain his present efficient office help. It would be difficult to improve upon it. His chief clerk, F. A. Cotton, besides doing heavy office work, owing to the frequent absence of Mr. Geeting, has done quite a little visiting and lecturing himself. Every one who writes for information gets a prompt reply, and every one who visits the office is courteously treated.

The JOURNAL congratulates Superintendent Geeting on what he has been able to accomplish and wishes for him another term of successful work.

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#### PRESIDENT MCKINLEY'S CABINET.

As a convenient reference we give President McKinley's Cabinet:—

Secretary of State, John Sherman, Ohio.

Secretary of the Treasury, Lyman J. Gage, Illinois.

Secretary of the Interior, Cornelius N. Bliss, New York.

Secretary of Agriculture, James Wilson, Iowa.

Secretary of War, Russell A. Alger, Michigan.

Secretary of the Navy, John D. Long, Massachusetts.

Postmaster-General, James A. Gary, Maryland.

Attorney-General, Joseph McKenna, California.



THE NATIONAL EDUCATIONAL ASSOCIATION will meet this years in Milwaukee, July, 6-9. The officers having the meeting in charge are hard at work preparing for it and are determined if possible, to make it surpass any of its predecessors in both numbers and interest. The railroads have conceded the usual terms, the programs will contain the names of some of the ablest educators of the country, and the local authorities are doing all they can to welcome and care for the large crowd they are expecting. Indiana ranks low in its membership in this association and it ought to make a great effort this year to forge toward the front. It pays in many ways to attend these gatherings of educational leaders. The State Association appropriated money for the establishment of headquarters at Milwaukee, and every thing possible is being done to make the trip pleasant and profitable. W. R. Snyder, of Muncie, is manager for Indiana this year, and is a hard worker. Write him for information.

AN ARTICLE on "Music in the Common Schools"—the negative side—by Prof. Brown, of New Castle, was crowded out of this issue of the JOURNAL.

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## QUESTIONS AND ANSWERS.

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### STATE BOARD QUESTIONS USED IN FEBRUARY.

SCIENTIFIC TEMPERANCE.—1. What products result from the oxidation of an animal tissue?

2. Does alcohol undergo any chemical change in the animal body? In what way does it act differently upon the tissues of the animal body?

3. Is the temperature of the body increased by a drink of alcohol?

4. What is the function of the red corpuscles of the blood? What is the effect which alcohol has upon the red corpuscles? This, in turn, produces what effect?

5. What is the difference between a stimulant and a narcotic?

6. Why is smoking especially dangerous for people who have not completed their physical growth? *(Any five.)*

PHYSIOLOGY.—1. To what extent would you employ the microscope in teaching physiology in the public schools?

2. How does nutrition differ from reproduction?

3. Describe the spinal column.

4. What is the function of the liver?

5. How do the bones of a child differ from those of an adult?

6. Why do we need sleep?

7. Describe the internal structure of the ear.

8. What are some of the evil effects of tight lacing?

9. If the brain is the seat of sensation, why, when the hand is injured, do we not feel the pain in the brain itself? *(Any five.)*

HISTORY.—1. To what degree have industrial pursuits determined political parties in the United States?

2. Give an estimate of the character of James Buchanan. What book or books have you read on this subject?

3. What did the term "Squatter Sovereignty" mean?

4. What are some of the effects of the introduction of the bicycle as a means of locomotion in the United States?

GRAMMAR.—1. With what unit of language does grammar deal? Illustrate.

2. State the use of each word in the following :

"He travels on, a solitary man ;  
His age has no companion."

3. Illustrate in sentences four uses of a clause.

4. Illustrate the difference between the indicative mode and the subjunctive mode ; explain.

5. Use the word "only" as an adverb and as an adjective.

6. What purpose may literature best serve in the teaching of grammar?

READING.—1. "In primary reading, the learner should proceed from the meaning to form, from idea or thought to the word or sentence expressing it." Show that the word and sentence methods are in harmony with the above idea. Is the Indiana First Reader made in harmony with the idea? 10

2. Show clearly that the child becomes much more self-helpful in learning to pronounce from the relation of the letters in the word than from diacritical marks. 10

3. Show that the end a teacher desires to reach in a given lesson determines the *preparation* of same. 10

4. Mention five suitable books for supplementary reading in third grade, giving reasons for books selected. 10

5. What do you regard as the limit of a safe and profitable correlation of studies, taking reading as the center? 10

6. Read a selection to the County Superintendent. 50

ARITHMETIC.—1. Give the principles of Notation.

2. In teaching compound numbers with what table would you begin, and why?

3. What is the difference between a problem that can be solved only by addition, and one that can be more easily solved by multiplication? Use an illustration to show more clearly your answer than a statement would do.

4. When is a fraction in its lowest terms? Which is in higher terms,  $\frac{1}{2}$  or  $\frac{1}{3}$ ? Why? Give full discussion.

5. Compare and contrast common fractions and decimal fractions. Show clearly in what they are alike ; in what unlike.

6. George, walking briskly, goes 6,600 steps per hour. He reaches the next village in 40 minutes ; how many steps distant is the place? How many miles if each step be 2.7 ft.?

7. What is discount? How many kinds? Name them, then give a suitable problem under each class.

8. The width of my book before it is opened is 9 in. and the length 12 in.; how many inches between the opposite corners after it is opened? What would be the diameter of a circle having an area equal to one side of my book?

9. What is the surface of a cube having solid contents of 6,859 cubic inches?

10. William Brown gives a note at a bank for 90 days. He realizes \$482 on the note. What is its face, money now being worth 8 per cent.?

SCIENCE OF EDUCATION.—1. Which is the richer content, the percept tree or the concept tree? Explain.

2. What is meant by *dead knowledge*? By *living knowledge*?

3. What do we mean when we say that instruction must result in power?

4. Define the will. What is the general relation of the will to the other activities of mind.

5. What is meant by a strong moral will?

6. On what do the training and development of the will depend?

(Any five.)

GUIZOT'S HISTORY OF CIVILIZATION.—1. Name and describe briefly the classes of persons found in Europe at the beginning of the fifth century.

2. When was the Church—the Church as an ecclesiastical society—organized?

3. How did the church benefit society:

(a) As to slavery?

(b) As to civil and criminal legislation?

(c) As to the penitentiary system?

(d) As to war?

4. What was the character of the influence of the church on the intellectual development of Europe.

5. From what view has Guizot judged the Church, from the successive events which have developed it or from the completed whole? Explain.

6. Describe the work of Gregory VII in connection with the Church. "A centralized theocracy supported by Monasteries." Explain.

7. Discuss the influence of the separation of the governors from the governed in the church. Why did this occur? How was the influence of the Christian public exerted in this period?

(Any four.)

GEOGRAPHY.—1. In what order should the three divisions of geography be taught? State reasons.

2. How does the Atlantic Coast of the United States compare with the Pacific Coast in (a) curvature, (b) elevation, (c) indentation?

3. What natural conditions favor the development of manufactures? What natural manufacturing conditions does Indiana present?

4. Why does California have wet and dry seasons, similar to the seasons of the Torrid Zone?

5. Why was the Mediterranean the natural seat of early navigation?
6. What two great rivers drain the lake region of Africa? Which of these is of great historical importance, and in what respects does it differ from most rivers? *(Any five.)*

### ANSWERS TO PRECEDING QUESTIONS.

ARITHMETIC.—1. The Roman notation is founded upon five principles, as follows:

Principles.—I. Repeating a letter repeats its value. Thus, II represents two, XX twenty, CCC three hundred.

II. If a letter of any value is placed after one of greater value, its value is to be united to that of the greater. Thus, XI represents eleven, LX sixty, DC, six hundred.

III. If a letter of any value is placed before one of greater value, its value is to be taken from that of the greater. Thus, IX represents nine, XL forty, CD four hundred.

IV. If a letter of any value is placed between two letters, each of greater value, its value is to be taken from the united value of the other two. Thus, XIV represents fourteen, XXIX twenty-nine, XCIV ninety-four.

V. A bar or dash placed over a letter increases its value one thousand fold. Thus, V signifies five,  $\overline{V}$  five thousand; L fifty,  $\overline{L}$  fifty thousand.

2. With that measure which the children have learned most about at home, for example, in many localities it would be liquid measure; in close connection with this, United States money should be taught.

3. Where only addition will do, the addends are unlike; as, A man owns six town lots. The first is worth \$550; the second, \$625; the third, \$875; the fourth, \$1,250; the fifth, \$900; the sixth, \$1,358. What is the value of the six lots? Where multiplication will do, the addends are alike; as, An agent sold 154 lots at \$138 apiece: how much did he receive?

4. A fraction is in its lowest terms when no number greater than one will exactly divide both numerator and denominator, that is, when the numerator and denominator are prime to each other;  $\frac{1}{2}$  is in higher terms than  $\frac{3}{6}$ .

5. Common fractions and decimal fractions are alike in the way their denominations are read; as, tenths, hundredths, etc., many belong to either kind. They both express parts of units. The denominator of a decimal must always be some power of ten; that of a common fraction may be any number. They are written differently. The value of each may be expressed in the form of the other.

6.  $(\frac{3}{4} \times 6600 \times 2.7) + 5280 = 2.25$ ; hence the answer is 2.25 miles.

7. (a) True discount; (b) bank discount; (c) and commercial or trade discount.

(a) How much should be discounted for the present payment of a note for \$429.986, due in 1 yr. 6 mo. 1 da., money being worth  $5\frac{1}{2}\%$ ?

(b) What are the proceeds of a note for \$384.50 at 90 days, if discounted at 6%?

(c) If I buy goods amounting to \$2359 at discount of  $33\frac{1}{4}\%$ , 10% and 5%, how much do they cost me?

8.  $12^2 + 18^2 = 468$ ;  $\sqrt{468} = 21.63$ ; hence, the diagonal is 21.63 inches.  $12 \times 9 = 108$ , the number of square inches in the area of one side of the book; considering 108 sq. in. as the area of a circle, we find its diameter to be 11.72+ inches.

9. The cube root of 6859 = 19;  $19^2 \times 6 = 2166$ , the number of square inches in the surface of the cube.

10. The proceeds of \$1 =  $\frac{1}{1188}$ ; this is contained into \$482, 492.17+ times; hence the face of the note is \$492.17+.

GEOGRAPHY.—1. *Logically*, the order is physical, mathematical, descriptive—because the physical geography conditions, in part, certain phases of mathematical geography, as climate; and both of these, in their influence over heat, moisture, and fertility, largely affect the distribution of plants and animals. *Pedagogically*, they should be correlated.

2. Along the Atlantic coast, there are many indentations as far south as  $35^\circ$  north latitude; along the Pacific coast, the indentations are few and small in comparison. "Elevation tends to produce smooth coasts, while depression introduces irregularities." Therefore, we infer that the Atlantic coast is sinking, and that the Pacific coast is rising. The Pacific coast presents a convex curve to the sea; the Atlantic coast, from Nova Scotia to Florida, presents three curves, concave to the sea.

3. Iron mines, coal mines, etc., (the raw material), water power, navigable streams, fertile soil, good climate, all favor the development of manufactures. Indiana presents coal mines, fertile soil, natural gas, petroleum, good climate, etc., and ground surface level enough to facilitate transportation.

4. The west coast of North America receives rainfall from the stormy westerly winds, which are strongest in the winter season; in the northern half of California, the land, in summer, is warmer than the air currents, and but little rain falls. In the *sub-tropical* zone, during the summer, the trade-winds prevail and but little rain falls; in the winter, variable winds occur, bringing an increase of rain, but in the *equatorial* zone, there are two annual rainy seasons, occurring in April and October.

5. It was in the *midst* of the people of that time, and was not so dangerous and uncertain as the open sea, and many of the routes were short owing to the numerous islands and the irregular contour of the coast line.

6. The Nile and the Congo. The Nile is of great historical importance and it differs from most rivers in the absence of tributaries along its main part, and in the regularity of its seasons of overflow.

LANGUAGE.—1. The unit of language that grammar deals with is the sentence; as, "The young man who came from the country has won the honors." This whole statement is a unit and typical of the language units which constitute the paragraph. The parts of this unit, their uses, and their relations constitute the subject-matter of grammar.

2. "He travels on, a solitary man;  
His age has no companion."

*On* is an adverb modifying "travels;" *man* is used as a predicate nominative, an attribute complement of "travels." (Some may prefer to consider "man" in apposition with "He," but this disposition of the word "man" is not in accord with the exact thought.) No other words in the sentence present any difficulty.

3. Four uses of a clause:—(a) *Adjective use*—This is the same horse that won the race. (b) *Adverbial use*—The meeting was postponed because it rained. (c) *Objective use*—I believe he is an honest man. (d) *Substantive use*—That he was skillful was soon perceived.

4. There is a difference in form in the third person, singular tense, as follows:—(a) Indicative, (*If*) he loves. (b) Subjunctive, (*If*) he love. With some authors, there is also a difference in form in the second person, singular, present, indicative. The indicative form is used if we wish to express a fact as a condition; as, "If the sun rises to-morrow, he dies." The subjunctive form is used to express a condition that is doubtful; as, "If it rain to-morrow, we will postpone our trip." There is a tendency among writers to ignore these differences.

5. I did not talk, I *only* laughed; here, "only" modifies the verb "laughed," and is an adverb. He is an *only* son; here, "only" modifies the noun, "son," and is an adjective.

6. Literature should be freely used to increase the power to interpret the *thought* of a sentence, that upon which the grammar of the sentence depends.

READING.—Fundamentally, the word method and the sentence method are alike. In the former the *idea* precedes the form; and in the latter the *thought* precedes the form. The Indiana First Reader is made in harmony with this fundamental principle. (See preface to First Reader).

2. When a child learns the relations of the letters in a word, he does not need the diacritical mark. A certain relation indicates a particular sound of a certain letter. When the letter is accompanied by a mark, the relation is likely to go unnoticed or unlearned. Let the relation be learned and applied, and the diacritical mark is unnecessary.

3. If in a recitation, the teacher desires to secure a certain end the features of his preparation should all look that way. The greatest caution should be exercised in avoiding features that would defeat desirable results. It is *self-evident* that if we wish to secure a certain end, our preparation should be such as to secure that end.

4. *Cyr's Third Reader*, on account of its introduction to literature. *Stories of American Life and Adventure*, on account of its historical trend in matters pertaining to our own country. *Stories from Old Germany*, on account of its presentation of those characteristics of what a hero should be. *Fable and Folk Stories*, on account of its appeal to the imaginative side of child life. *Grimm's Fairy Tales, Part I.*, on account of its appeal to the imagination, and its teachings in regard to kindness to animals.

5. The answer to this depends upon what you read. It would be possible to choose reading material so that in connection with the reading, other branches could be learned. To that degree to which the reading matter

treated of other branches, to such degree could the correlation be made safe and profitable. But it would not be either safe or profitable to depend upon this basis as a means of securing a systematic and thorough knowledge of the other branches.

SCIENTIFIC TEMPERANCE.—1. Carbon dioxide, water and urea. The oxygen that is taken into the lungs and absorbed by the red corpuscles, is conveyed to all parts of the system. Carbon and hydrogen throughout the body unite with the oxygen, and form carbon dioxide and water, which are taken up by the blood, carried to the lungs, and expelled from the system.

2. The oxygen of the arterial blood, which, in the absence of alcohol, would have combined with the matter of tissues, now combines with the elements of the alcohol. The arterial blood becomes venous without the substance of the muscles having any share in the transformation.—*Liebig*. It acts differently from other things, upon the tissues, on account of its great affinity for water and its power to coagulate albumen. Alcohol acts most perniciously upon the red corpuscles by dissolving the iron, and devitalizing them so that less oxygen can be absorbed and less carbon carried out.—*Hargraves*. It arrests the development of the blood-globules, irritates the mucous membrane and other tissues, impedes the digestion of food, deadens the nerve forces, creates an unnatural excitement of the heart, and impedes and prevents the reparative processes. It injures the human system by interfering with the natural operations of water within the organism by extracting it from the tissues; and by coagulating the albumen of the blood.

3. Alcohol, even in moderate doses, causes a lowering of the temperature of the body. The amount of diminutives of temperature is directly proportional to the amount of alcohol given. The depression of temperature is but of short duration, and the temperature soon returns to its previous grade.—*Dr. Franz Riegel*. The elimination of carbon dioxide is diminished and the temperature of the system lowered.—*Richardson*.

4. The red corpuscles are carriers of oxygen. Alcohol acts most perniciously upon the red corpuscles by dissolving the iron, and devitalizing them so that less oxygen can be absorbed and less carbon carried out. (See answer to 2).

5. "*Stimulants* are those agents which increase or intensify the forces of the system. *Narcotics* are the agents which paralyze or depress the forces of the system. These opposite effects are produced by the same agents, modified by the quantity, the age, the sex, the temperament and the condition of health, the general law being that small quantities stimulate and large quantities depress, other things being equal, and that large quantities at first stimulate, then depress. Large and small are relative terms, and what would be a large quantity for one person may be a small quantity for another. All stimulants, then, are narcotic when pushed to an extreme in quantity or continued in time. All narcotics are stimulants in small quantities and when first taken."—*Lind*.

6. The tissues of the body are much more tender and sensitive in young persons than in those of mature life, and are therefore much more easily affected; a tissue in the process of growth does not have the power of

resistance found in a tissue that has matured. The use of tobacco, therefore, is especially injurious to young persons. The poisonous juice is absorbed, enters the circulation and passes throughout the whole system. It perverts the taste, impairs mental capacity, corrupts the moral sense, and stimulates the animal nature. The evils through the laws of inheritance extend to even the second, third and even fourth generation. Dyspepsia is one of the commonest diseases, resulting from the use of tobacco. Last but not least it excites such a strong desire for strong drinks that the use of it is a stepping stone to that use of spirituous liquors which leads to intemperance.

SCIENCE OF EDUCATION.—1. Based on the fruit of generalization, the concept tree has the richer content, because it causes a typical tree, a type of a whole class of objects to arise in the mind, whereas the percept tree is the impression made upon the mind by an individual tree only. Based on the possible number of characteristics, the percept tree may have the richer content, for the concept tree is made up only of those characteristics common to the whole class, while the percept tree possesses these, and perhaps others found only in the individual object affording the percept.

2. Dead knowledge specifically, may include geographical names, unrelated to any idea of progress; names and locations of many unimportant capes, bays, islands, lists of minor battles and wars, with the number of men engaged on each side, and other points of history and in other branches unrelated to the progressive development of the human race. We might add that much of the contents of the average newspaper is dead knowledge. Expressed generally, dead knowledge is that portion of our store of ideas and facts, which is never awakened or drawn upon to assist in apperceiving a new idea or fact presented to the mind, because there is no relation between any part of this known and the desired unknown. *Living knowledge* is that portion of our store of ideas and facts, which is being constantly recalled or awakened to assist in apperceiving a new idea or fact presented to the mind, on account of the relations existing between this part of our known and desired unknown.

3. When we say that instruction must result in power, we mean that the knowledge imparted and the process by which the pupil was caused to know must both be of such a nature that the mind faculties of the pupil will become stronger through the well-ordered exercise of them in attaining and assimilating the information.

4. The will is that power of the mind which chooses, decides, and controls action; the will should become monarch of the mind; all the other activities should be brought into subjection to it. Strength of character depends entirely upon the mastery which the will has acquired over life. (General Method, p. 205).

5. A strong moral will is a will, able, in the daily contact of the individual with temptations to guide him safely through them, without the least surrender to their seductive attractions, the will asserting its supremacy in every instance of contact with temptation.

6. This exercise of the will depends upon knowledge—knowledge sufficient to give the individual faith in the possibility of an undertaking.



Much successful experience in any line of work brings increasing confidence and the will is greatly strengthened, because one knows that certain actions are possible. Increase of knowledge well digested makes it possible for the will to act with greater energy in various directions. (Gen. Method p. 206-207). The training and developing of the will depends upon its frequent and successful exercise; according to the law that any faculty tends to act more readily in a way which is similar to any in which it has acted before. One result of this physical tendency is power, and not only applies to the training of the will but to the other faculties as well.

PHYSIOLOGY.—1. If opportunity permitted, it should be used in the study of the blood and tissues.

2. *Nutrition* is the process by which the tissues of the body receive nourishment to take the place of the waste which is constantly going on. Nutrition is a comprehensive term involving digestion, absorption, circulation, and assimilation.

*Reproduction* may refer to the process by which a portion of a bone is entirely reproduced, provided the periosteum has not been destroyed. Or, it may refer to the natural tendency of all things endowed with life, animal and vegetable, to reproduce its kind, and thereby preserve its species. In regard to the *cell*, nutrition means the supplying of nutrient material to take the place of that which has served its purpose and is worn out; and reproduction means the process by which the cells multiply or increase in number.

3. See Adv. Phys., P. 34-35.

4. The liver secretes the bile, converts grape sugar to glycogen, for the purpose of storage, and converts it back again into sugar as the latter is needed in the system.

5. The bones of young persons and those of old differ in the proportion of animal and mineral matter contained in them. In young persons the proportion of organic matter is greater than in adults and the bones are consequently softer and more flexible. In old age the proportion of inorganic, or mineral matter is greater, and the bones are harder and more brittle.

6. Sleep is "tired nature's sweet restorer." During this period the repair of the entire system goes on, and the excess of waste over repair during waking moments is counterbalanced. The work and cares of the day exhaust the cells, the fundamental organs of the system. This exhaustion affects their contents and their form and in this condition it is worse than folly to push them to additional work. During rest their contents are renewed and revived and their normal form is regained, and they are ready for work again.

7. See Adv. Phys., P. 280.

8. Tight lacing is very injurious, for not only does it produce actual deformity of the bones of the thorax and injure the internal organs, but it destroys the natural shape of the body, and thus violates a law of taste in art. Really sensible and refined people do not admire an unnaturally small waist. The Greek statues of beautiful women, which have been admired by artists the world over, do not show small waists.

9. Because the brain is not the injured part ; the part injured, for example, the hand, is the part that is in an abnormal condition, the nerve cells and filaments distributed to this part being so injured or destroyed that they cannot perform their usual functions. The brain locates the pain at the injured part, wherever it may be. The power of correctly localizing sensations of touch is gradually derived from experience. Thus, infants when in pain simply cry, but make no effort to remove the cause of irritation, as an older child or adult would, doubtless on account of their imperfect knowledge of its exact situation. By long experience this power of localization becomes perfected, till at length the brain possesses a complete "picture" as it were of the surface of the body, and is able with marvelous exactness to localize each sensation of touch.

HISTORY.—1. The manufacturing industries in their efforts to shut out foreign competition have given rise to two "planks" of opposite bearings, a high or a protective tariff plank generally advocated by the Republican party and a low revenue tariff plank advocated by the Democratic party. The Republican party has had its largest following in the north, where, in the past, there has been the greatest number of manufacturing interests. The Democratic party has had its largest following in the south, where, in the past, the people have been almost wholly agricultural.

2. James Buchanan was the Democratic candidate for President in 1856, and he was elected. The Dred Scott decision, John Brown's raid and other events connected with slavery and leading up to the Civil War marked his administration, and it was due to his lack of energy, and his opinion that the federal government could not interfere to keep any State in the Union by force, that the nation was in no condition to meet the crisis. He retired to private life immediately on leaving the presidency.—*Dictionary of American Politics*.

Buchanan, besides being the nominee of the slave owners, was a weak man, and his position was weaker still. He was an outgoing president, about to be replaced by a President-elect of the opposite party. Buchanan first in a double-faced manifesto, pronounced that secession was unconstitutional, but coercion was illegal. Afterwards, Southerners having left his Cabinet, and being replaced by unionist Democrats, he somewhat altered his tone, while one of his ministers, General Dix, sent the telegram ; "If any man attempts to haul down the American flag, shoot him on the spot ;" to which the spirit of the north gave a response which might have been a warning to the south. But Buchanan's sole desire was to be gone, and cast the burden on his successor. His conduct could not be less resolute and brave than that of Congress, which, in truth, was an ominous lesson on the character of the politician trained in the caucus and upon the platform.—*Goldwin Smith*.

Buchanan was the survivor of a generation whose leaders loomed as giants beside the electioneering politicians and sectional fanatics of the present. A veteran diplomatist, a former Secretary of State, the contemporary and associate of Clay and Adams, Webster and Calhoun—he had no living superior in practical experience and official reputation. Like most of

those who thus rise by seniority to the foremost rank, he was distinguished rather for gravity than for wisdom, and enjoyed that credit as a safe man which is seldom earned save by cautious weakness and pliant mediocrity.—*Percy Gregg.*

3. "This name was applied to the doctrine that the principle of slavery" should be kept out of the national Legislature, and left to the people of the Confederacy in their respective local governments. "It was first stated as above by Lewis Cass in 1847. Behind this doctrine the northern Democrats sought refuge, both from the Wilmot Proviso and from the southern demands for active measures in behalf of slavery. On the other hand, Calhoun maintained that a man's right to his property, even though it be in slaves, must everywhere be maintained, so that a man could take his slave into any territory regardless of the wishes of the inhabitants thereof. Calhoun nicknamed the doctrine "squatter" sovereignty. Douglas, its chief supporter, maintained that it was the basis of the compromise of 1850, and in the Kansas-Nebraska Bill another attempt to apply it was made. But when it became evident that this doctrine meant the admission of all future Territories as free, the interpretation was strained so as to bring it within Calhoun's declarations, on the ground that a territory could not manifest its intentions on the subject until it was ready to be admitted as a State, in other words, not through its Territorial government. A disagreement on this subject led to the withdrawal of a part of the Democratic National Convention which nominated Douglas in 1860.

4. The introduction of the bicycle as a means of locomotion has had the following effects: (a) It has lowered the price of horses. (b) It has brought into prominence the idea of good roads. (c) It has caused many bicycle factories to be established. (d) It has caused an increased intercourse between the town and the country. (e) It has brought health to some and the "bicycle stoop" to others. (f) It has brought into prominence the idea of dress reform. (g) It has brought about certain legislation in regard to sidewalks and road rights.

HISTORY OF CIVILIZATION.—1. The Latins and Tentons; see also page 72 of Guizot.

2. See page 124; and 151, note.

3. (a) The church opposed it strongly. (P. 162-163.) (b) She tried to improve civil and criminal legislation. (P. 163-164.) (c) She practiced a system of penance, the objects of which were to excite repentance in the soul of the guilty, and to deter those from vice who might be under temptation,—and their objects are the end of every truly philosophical legislation. (P. 167.) (d) She tried to suppress war. (P. 168.)

4. For the intellectual development of England the Church did much. She "has exercised a vast and important influence upon the moral and intellectual order of Europe; upon the notions, sentiments, and manners of society." (p. 169.) She has given to the development of the human mind, in our modern world an extent and variety which it never possessed elsewhere; \* \* \* we must acknowledge, etc. (P. 170.)

5. From the complete whole. Neither a man nor a church is the same in character or power, throughout its life; we must come to the end of its

career, before we can view it as a whole ; but we must not suppose that the view then obtained is a true picture of every period of its life. (See P. 173-174.)

6. The monastic institutions were places where persons lived a life of religious retirement, and took upon themselves vows of poverty, chastity, and obedience ; they also, by their rules of discipline, devoted their time to study and to manual labor. Gregory VII., as far as he was able individually, brought these monastic institutions under the papal jurisdiction, reformed their abuses, organized them upon a uniform basis, and used them as far as possible in supporting the Church in its various lines of work. (See P. 181-182.)

7. Guizot says that, "there is in the very nature of religious society a powerful inclination to elevate the governors above the governed. This is the effect of the mission with which they are charged ; of the character in which they appear before the people." (P. 156.) The Christian public, in this period, exercised an influence through the force of ideas common to the governing and the governed, by the absolute necessity under which the governing found themselves of attending to the opinions of the governed \* \* \* there was a great advancement of mind in religious matters ; this movement bore along clergy and laity together, and in this way the people acted with the church." (P. 159 ; see also the note on P. 49.) In the individual the love of power and the opportunity to wield it have a strong tendency to cause the possessor to consider himself as distinctly and specially separated from those whom he rules. Under the same conditions the same tendency is always discoverable in the life of a society, acting as a unit. In either case, despotic rule is prevented by the inborn feeling in the individuals constituting the governed that "there is a limit at which forbearance ceases to be a virtue," and that there are opinions of the governed that the governing must respect. The feeling in the ruler that comes from his right to rule and from his love of authority is a kind of intoxication that banishes brotherly love and dethrones sober common sense.

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SALT LAKE CITY, UTAH, March 1.—What appears to be a genuine volcano has burst forth in the great Salt Lake, a short distance southwest of Promontory station, on the Central Pacific Railway. The phenomenon first appeared recently in the shape of a small cloud hovering over the water about a mile and a quarter from the shore. It gradually increased in dimensions, and shot up so high in the air that it is now visible for a great distance. The water in the immediate vicinity boils and seethes and the spray is thrown up in the air hundreds of feet. The volcano is situated in the big arm of the lake, on the west side of a long range of mountains, and is distinctly visible from Brigham City. The phenomenon is accounted for by the fact that for the last six months there have been felt several slight shocks of earthquake in these regions, and it is supposed the fire and lava which have been confined in the subterranean depths have now found an outlet and are spending their force. A number of people have witnessed the phenomenon, which has caused considerable alarm in the vicinity.—*Ex.*

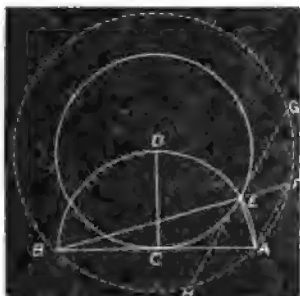
## FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. The should be received by April 18. Be prompt. Write only on one side of your paper.]

### SOLUTIONS TO PROBLEMS.

**PROBLEM 161.** Divide a semi-circumference into two parts such that the radius shall be a mean proportional between the chords of the parts.—  
JOHN C. GREGG, A. M., Brazil.

Solution by the proposer :



$AB$  = given semi-circumference, and  $C$  its center. Draw the radius  $CD$  perpendicular to  $AB$ . With  $D$  as center and  $CA$  or  $DC$  as radius describe an arc cutting the semi-circumference in  $E$ . Then  $E$  is the required point of division, and  $BE : CA :: CA : EA$ . Proof :—With  $D$  as center and  $DA$  or  $DB$  as radius, draw the arc  $BHFG$ . At  $E$  draw the chord  $HEG$  tangent at  $E$ . Produce  $BE$  to  $F$ , and draw  $AF$ . The angle  $AEF = AEB =$  a right angle. The angle  $EFA = \frac{1}{2}$  a right angle, as it is measured by the quadrant  $BHA$ .  $\therefore$  The triangle  $AEF$  is isosceles and  $AE = EF$ . Again, since the chords  $AB$  and  $GH$  are equally distant from the center  $D$ , they are equal and are bisected at  $C$  and  $E$ , and  $CA = EH = EG$ . Now, as these chords intersect in  $E$ , we have  $BE \cdot EF = EH \cdot EG$  or  $BE \cdot AE = EH^2 = CA^2$ . Therefore,  $BE : CA :: CA : AE$ . Q. E. D.

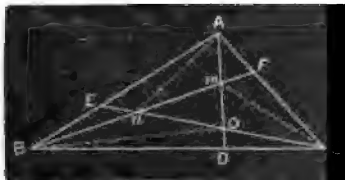
**PROBLEM 162.** Factor the expression  $x^2 - 2xy - 8y^2 - 2x + 20y - 8$ .  
—I. H. S. MATHEMATICAL CLUB.

Solution by ELMER E. CARTER, Frankton :

$$(x^2 - 2xy - 8y^2 - 2x + 20y - 8) = (x - 4y + 2)(x + 2y - 4).$$

**PROBLEM 163.**  $ABC$  is any triangle. Take  $AF = \frac{1}{n} AC$ ;  $CD = \frac{1}{n} CB$ ; and  $BE = \frac{1}{n} BA$ . Connect  $FB$ ,  $AD$ , and  $EC$ . Let  $AD$  intersect  $FB$  at  $m$ , and  $CE$  at  $o$ , and let  $CE$  intersect  $FB$  at  $n$ . Find the area of  $mno$  in terms of  $ABC$ .—I. H. S. MATH. CLUB.

Solution by BERTRAM SANDERS, Connersville:



A general solution when  $AF = \frac{1}{n} AC$ ;

$CD = \frac{1}{n} CB$ ; and  $BE = \frac{1}{n} BA$ .  $ADB = (n-1)ADC$ .....(1);  $mDB = (n-1)mDC$ .....(2); therefore subtracting (2) from (1), we have  $AmB = (n-1)$

$AmC$ . Similarly,  $BmC = (n-1)BmA$ ,  $BnC = (n-1)BnA$ ,  $AnC = (n-1)BnC$ ,  $CoA = (n-1)CoB$ , and  $AoB = (n-1)AoC$ . Therefore,  $AmC : AmB : BmC :: 1 : (n-1) : (n-1)^2$ , and  $AnB : BnC : AnC :: 1 : (n-1) : (n-1)^2$ , and  $BoC : CoA : AoB :: 1 : (n-1) : (n-1)^2$ . Since  $AmC$

$+AmB+BmC=AnB+BnC+AnC=BoC+CoA+AoB=ABC$ ,  
we have  $AmC=AnB=BoC=\frac{1}{n^2-n+1}(ABC)$ . Therefore,  $AmF=$

$BE n=oDC=\frac{1}{n(n^2-n+1)}(ABC)$ . Therefore,  $AmF+BE n+oDC$   
 $=\frac{3}{n(n^2-n+1)}(ABC) \dots (3)$ .  $AmnE+BE n+FmoC+AmF+BnoD$

$+oDC+mno=\frac{n}{n}ABC \dots (4)$ .  $AmnE+2BE n+FmoC+2AmF$   
 $+BnoD+2oDC=\frac{3}{n}ABC \dots (5)$ . Subtracting (5) from (4), we have

$mno-(AmF+BE n+oDC)=\frac{n-3}{n}(ABC) \dots (6)$ . Combining (6)

and (3) we have,  $mno-\frac{3}{n(n^2-n+1)}(ABC)=\frac{n-3}{n}(ABC)$ .

Transposing, we have  $mno=\left[\frac{3}{n(n^2-n+1)}+\frac{n-3}{n}\right](ABC)=$   
 $\left[\frac{n^3-4n^2+4n}{n(n^2-n+1)}\right](ABC)=\frac{(n-2)^2}{n^2-n+1}(ABC)$ . When  $n=3$ ,  $mno=\frac{1}{4}(ABC)$

Q. E. F.

J. C. GREGG solved this problem both by a special solution and by a general solution.

Solution of 163 by W. F. L. SANDERS:

By referring to the figure, it is readily seen that,

$$AmC:AmB:BmC::1:2:4;$$

$$\text{also, } AnB:BnC:CnA::1:2:4;$$

$$\text{and, } BoC:CoA:AoB::1:2:4.$$

Therefore,  $AmC=AnB=BoC=\frac{1}{4}ABC$ .

$$AmC=mFC+mFA;$$

$$\text{also, } AnB=nAE+nEB;$$

$$\text{and, } BoC=oDB+oDC.$$

$$\text{Now, } mFC:mFA::2:1; mFA=\frac{1}{3}AmC.$$

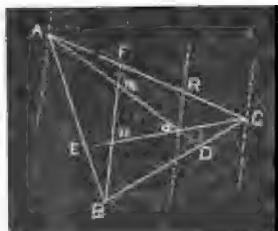
$$\text{also, } nAE:nEB::2:1; nEB=\frac{1}{3}AnB.$$

$$\text{and, } oDB:oDC::2:1; oDC=\frac{1}{3}BoC.$$

Therefore,  $mFA=nEB=oDC$ .

Now,  $ABF$ ,  $ADC$ , and  $CEB$ , are each equal to  $\frac{1}{3}ABC$ ; in adding them, the triangle  $mno$  is excluded, but the triangles  $mFA$ ,  $nEB$ , and  $oDC$  are each included twice; therefore,  $mFA+nEB+oDC=mno=AmC=AnB=BoC$ . Hence,  $mno=\frac{1}{4}ABC$ .

Solution by E. E. VANCE, Arcadia:



Take  $mno$  any triangle. Produce  $mn$  to  $B$ ,  $no$  to  $C$ , and  $om$  to  $A$  so that  $nB=mn$ ,  $oC=no$ , and  $Am=om$ . Draw  $AB$ ,  $BC$  and  $CA$ . Produce  $Ao$ ,  $Cn$  and  $Bm$  to meet  $BC$ ,  $AB$ , and  $AC$  respectively in  $D$ ,  $E$ , and  $F$ . Through  $A$ ,  $O$  and  $C$  draw lines parallel to  $BF$ , and let the one through  $O$  meet  $AC$  in  $R$ . Now  $CR=FR$  and  $AF=FR$  (since  $oC=no$  and  $Am=om$ ). Therefore,  $AF=FR=CR=\frac{1}{4}AC$ . In like

manner, show  $CD = \frac{1}{2}CB$ , and  $BE = \frac{1}{2}BA$ . Therefore if the conditions of the problem are complied with  $no = Co$ ,  $om = mA$ , and  $mn = nB$ . Hence triangle  $ABm =$  twice triangle  $mno$  (having equal altitudes) and base  $Bm =$  twice base  $mn$ . In like manner, triangle  $AoC =$  twice triangle  $mno$ , and triangle  $CnB =$  twice triangle  $mno$ . But triangle  $ABC =$  triangles  $mno + ABm + AoC + CnB$ . Therefore,  $ACB = 7mno$ , or  $mno = \frac{1}{7}ABC$ .

**PROBLEM 164.** A horse is sold for \$131.25. The man who sells the horse gains as much per cent. as the horse cost him in dollars. What was the cost of the horse?—JAMES BLUNT, Austin.

Solution by EVERETT BEADLES, Velpen :

Let  $x =$  the cost; then  $x =$  the gain per cent. ;  $\frac{x}{100} \times x = \frac{x^2}{100} =$  the gain ;  $x + \frac{x^2}{100} =$  the selling price ; therefore,  $x + \frac{x^2}{100} = \$131.25$ ;  $x^2 + 100x = 13125$  ; completing the square,  $x^2 + 100x + 2500 = 15625$  ; extracting the square root of both sides,  $x + 50 = 125$ ,  $x = 125 - 50 = \$75 =$  the cost of the horse.

**PROBLEM 165.** A has a certain sum of money. He gives to B \$11 and one-thirteenth of what remains ; he then gives to C \$12 and one-twelfth of what remains, and finds that he has given to each the same sum. How many dollars had A ?

Solution by W. F. HEADLEY, Bloomington :

Let  $x =$  A's money ; then  $11 + \frac{x-11}{13} =$  what A gives B ; let  $y =$  what A has left ; then  $12 + \frac{y-12}{12} =$  what A gives C ; therefore,  $11 + \frac{x-11}{13} = 12 + \frac{y-12}{12}$ , from which  $x = 11 + 13y$ . If  $y = 1$ ,  $x = 24$  ; if  $y = 2$ ,  $x = 37$  etc. This problem admits of an indefinite number of answers.

**PROBLEM 166.** Two clocks begin to strike twelve together ; one strikes it in 28 seconds, the other in 25 seconds ; what is the interval between their fifth strokes ?

Solution by J. C. DICKERSON, Goodland :

Interval between strokes in the first case  $= 2\frac{8}{11}$  seconds. Interval between strokes in the second case  $= 2\frac{5}{11}$  seconds. At second stroke, one would be  $\frac{3}{11}$  seconds behind the other, and at fifth stroke  $\frac{13}{11}$  or  $1\frac{2}{11}$  seconds behind.

**PROBLEM 167.** 1 lb. of tea and 3 lbs. of sugar cost together \$1.50 ; if sugar were to rise 50 per cent. and tea 10 per cent. in price, they would cost \$1.75 ; find the price of tea.

Solution by IRA W. YROMAN, Remington :

Let  $x =$  the cost of tea ;  $150c. - x =$  cost of sugar ;  $\frac{150c. - x}{2} =$  rise in

cost of sugar;  $\frac{x}{10}$  = rise in cost of tea;  $\frac{450-3x}{2}$  = cost of sugar after rise;  
 $\frac{11x}{10}$  = cost of tea after rise;  $\frac{450-3x}{2} + \frac{11x}{10} = 175$ ;  $2250 - 15x + 11x =$   
 $1750$ ; solving,  $x = 125$ ; therefore, the cost of tea = \$1.25.

**PROBLEM 168.** A, B, and C start from the same point at the same moment to travel around an island 34 miles in circumference. A goes 13, B 7 and C 4 miles an hour. When and where will they first be together again?

Solution by J. C. GREGG, Brazil:

A and B will be together every  $5\frac{1}{2}$  hrs.; A and C will be together every  $3\frac{1}{2}$  hrs.; B and C will be together every  $11\frac{1}{4}$  hrs. Now the L. C. M. of  $5\frac{1}{2}$ ,  $3\frac{1}{2}$  and  $11\frac{1}{4}$  is  $11\frac{1}{4}$ . Hence, they will all be together every  $11\frac{1}{4}$  hours. If two of them went in one direction and a third went the opposite, they would all be together every 34 hours.

**PROBLEM 169.** The dimensions of a rectangular box are as 2:3:4, and the difference between the cost of covering it with sheet lead at 16c. and 17c. per square foot is \$1.17; find its dimensions.

Solution by HELEN WESTON, Fairmount:

Let the dimensions be  $2x$ ,  $3x$  and  $4x$  feet; area of entire surface =  $2(2x)4x + 2(3x)2x + 2(3x)4x = 52x^2$ ;  $52x^2(17) - 52x^2(16) = 117$ ; solving  $x = \frac{1}{2}$ ; therefore the dimensions are 3,  $4\frac{1}{2}$  and 6 feet.

**PROBLEM 170.** Given  $x^2 + \frac{4}{x^2} = 14 + 6\left(x + \frac{2}{x}\right)$ , to find  $x$ .

Solution by J. D. FRENCH, Whiting:

$$\left(x^2 + 4 + \frac{4}{x^2}\right) - 6\left(x + \frac{2}{x}\right) = 18.$$

$$\text{Or, } \left(x + \frac{2}{x}\right)^2 - 6\left(x + \frac{2}{x}\right) = 18; \text{ completing the square}$$

$$\text{and solving, we find } x = \frac{1}{2} (3 \pm 3\sqrt{3} + \sqrt{28 \pm 18\sqrt{3}}).$$

**PROBLEM 171.** Given  $x^2 + y = 69$ ,  $y^2 + x = 33$ , to find  $x$  and  $y$ .

Solution by W. S. GLESSNER, Herbst:

$$x^2 - 64 = 5 - y, x - 8 = 25 - y^2; \frac{x}{5+y} - \frac{8}{5+y} = 5 - y; x^2 - 64 = \frac{x}{5+y} - \frac{8}{5+y}; x^2 - \frac{x}{5+y} = 64 - \frac{8}{5+y}; x^2 - \frac{x}{5+y} + \frac{1}{4(5+y)^2} = 64 - \frac{8}{5+y} + \frac{1}{4(5+y)^2}; x - \frac{1}{2(5+y)} = 8 - \frac{1}{2(5+y)}; x = 8, y = 5.$$

**PROBLEM 172.**  $\frac{1}{4}$  of the cube of a number is one less than the cube of  $\frac{1}{4}$  of the number. What is the number?

Solution by CARRIE LE VAUGH, Macy:

$$\text{Let } x = \text{the number; } \frac{7x^3}{3} + 1 = \left(\frac{4x}{3}\right)^3; \text{ solving } x = 3.$$

**PROBLEM 173.** Deduce the formula for the circumference of an ellipse in terms of the major and minor diameters.

No solutions to this problem were received.



## ANSWERS TO QUERIES.

48. What are the essentials of the "Pollard Method?" Please illustrate. Do you think it is better than either the word or the sentence method?—J. STOMMEL, Hanover Center.

J. M. MATHENY, Remington, writes as follows: This system is called the Synthetic Method also. It begins with sound which is the unit of language. These sounds are learned and named by associating them with familiar sounds as cat, boy, etc.

Short *a* is the basis of the lamb's cry, and is written with the breve above it  $\breve{a}$ . Short *a* is the starting point and no other vowel is taken up until short *a* is mastered. Certain consonant sounds are now developed in the same manner from nature. One or more familiar consonants form a "key." A single consonant or key joined to a vowel makes a "family" as, *at, ag, am* etc. Lastly the word is formed by combining perfectly familiar families with perfectly familiar keys, *e. g.*, in the word black, *ack* is the family and *b* is the key; family and key compose the word.

Advantages of the method:—(1.) This method does not depend upon the memory for a ready recognition of words. (2) It gives an independence in the recognition of words. That which the pupil secures for himself he is most apt to retain. (3) Gives rational scope and aims to the diacritical marking. (4) Complete system of vocal training. (6) Distinct enunciation, perfect articulation, and proper pronunciation. (7) It makes good spellers. Any one wanting work along this line, can get the primers, or readers, or spellers through me.

## CREDITS.

164, 169, 172, Helen Weston, Fairmount; 166, 167, 172, James Blunt, Austin; 161, 163, E. E. Vance, Arcadia; 161, Merl Chenoweth, Valparaiso; 164, 167, 168, 169, 172, Carrie LeVaugh, Macy; 167, 172, 164, Everett Beadles, Velpen; 164, 166, 167, 172, Ira W. Yeoman, Remington; 166, Harry B. Midkiff, Fort Reno, Oklahoma Ter.; 166, 164, 167, 171, J. D. French, Whiting; 167, E. C. West, Kit; 166, 167, J. B. Royce, Coal Bluff; 169, 167, 162, 164, 172, Elmer E. Carter, Frankton; 169, 171, 172, W. S. Glessner, Herbst; 164, 166, 168, 170, 172, C. C. Kagey, Hope; 164, 167, Alton Blunk, Crown Center; 161, 162, 164, 166, 167, 171, J. Stommel, Hanover Center; 161, 162, 164, 165, 166, 167, 168, 169, 170, 171, 172, J. C. Dickerson, Goodland; 169, 171, 168, 167, 164, 165, 172, W. F. Headley, Bloomington; 161, 162, 163, 164, 165, 166, 137, 168, John C. Gregg, Brazil; 166, 168, 169, 172, John Morrow, Charlestown; 167, Walter Vanscoyoc, Whitesville; 162, 164, 166, 167, 168, 169, 170, 171, 172, Charles Kizer, Linn Grove. (These solutions were remarkable for their neatness and brevity); 166, 167, 168, 162, 164, 172, C. E. Smith North Judson.

## PROBLEMS.

174. If 30 men can dig 80 cubic yards in 40 hours, how many men, who are stronger in the ratio of 3 to 5, would it require to dig 120 cubic yards in 45

hours, supposing the ground in the latter case is harder than the former' in the ratio of 8 to 9.

175. A tree 100 feet high stood on the side of a mountain. It was broken by the wind and fell directly down the mountain, the broken part adhering to the stump, and the top struck the ground 50 feet from the foot of the stump. A horizontal line from the foot of the stump to the broken part measures 30 feet. Find the height of the stump and the length of the part broken off.

176. Two lines, AB, AC, whose respective lengths are 10 and 16 feet, meet at a point A, making an angle of 50 degrees. By a geometrical construction, find two points, P, Q, situated on AB, AC, respectively, so that  $PQ = PB = QC$ .

177. Given  $\sqrt{x^2 - \frac{a^4}{x^2}} + \sqrt{a^2 - \frac{a^4}{x^2}} = \frac{x^2}{a}$ , to find  $x$ .

178. A bank, by discounting a note at 6 per cent., receives for its money a discount equivalent to  $6\frac{1}{4}$  per cent. interest. How long must the note have been discounted before it was due?

179. MR is a diameter of a given circle, and PM a tangent. Draw another tangent PS and draw SQ perpendicular to MR. Prove that SQ is bisected by PR.

(Several items stand over, to be published next month).

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## MISCELLANY.

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### SPRING.

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Glad and quick is nature's waking,  
Brighter, clearer are the days,  
Like the human soul when taking  
Courage, from great poets' lays.

Where was bondage, now is freedom,  
Where was darkness, now is light,  
Where was earnest, hopeful longing,  
Now is realization bright,

West Lebanon.

—Mrs. James Miller.

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### TREASURER'S REPORT.

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*James R. Hart, Treasurer, in Account with Indiana State Teachers' Association.*

1896.

Jan. 1	To balance on hand.....	\$236 59
Dec. 29	To cash from members.....	367 00
	To cash from Dr. Jones's lecture.....	10 50
	To cash from rent of church lobby.....	6 00
	To cash from Denison Hotel Co.....	150 00

By cash to Plymouth Church rent, voucher 1	\$ 50 00	
By cash to E. T. Forsythe, Com. expenses, voucher 2.....	5 00	
By cash to L. D. Eichhorn, Com. expenses, voucher 3.....	4 50	
By cash to J. A. Carnagie, Com. expenses, voucher 4.....	6 50	
By cash to L. M. Sniff. Com. expenses, voucher 5.....	22 60	
By cash to C. F. McIntosh, Com. expenses, voucher 6.....	5 80	
By cash to Geo. L. Roberts, Com. expenses, voucher 7.....	13 10	
By cash to Dr. Jenkyn Lloyd Jones, lecture and expenses, voucher 8.....	60 00	
By cash to Central Traffic Committee, expenses of special agent, voucher 9.....	17 00	
By cash to J. R. Hart, printing, voucher 10....	29 50	
By cash to W. E. M. Browne, music, voucher 11	1 33	
By cash to Whitehead Hoag Co., badges, voucher 12.....	30 00	
By cash to J. C. Gregg, assistant secretary, voucher 13.....	4 00	
By cash to Charles Cunningham, assistant secretary, voucher 14.....	3 00	
By cash to Evansville Journal Company and Dr. Jones's hotel bill, voucher 15.....	6 00	
By cash to W. A. Hester, Com. expenses, voucher 16.....	100 80	
By cash to J. R. Hart, expenses and salary, voucher 17.....	66 28	
By cash to T. G. Alford, assistant secretary, voucher 18.....	3 00	
By cash to Emma B. Shealey, Rec. Sec. and expenses, voucher 19.....	17 00	
By cash to Hamlet Allen, Com. expenses, voucher 20.....	10 75	
By cash to legislative Committee, expenses, voucher 21.....	63 25	
By cash appropriated for headquarters at National Educational Asso., voucher 22....	50 00	
Total receipts and expenditures.....	\$770 09	\$569 41
To balance on hand January 1, 1897.....		200 68
	\$770 09	\$770 09

Number of members who have paid dues, 631. This is the largest enrollment in the history of the Association. Respectfully submitted,

JAMES R. HART,  
Permanent Sec. and Treas., I. S. T. A.

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SOUTHERN INDIANA TEACHERS' ASSOCIATION.

The twenty-first annual meeting of the Southern Indiana Teachers' Association will be held at Franklin, April 8-9-10. The meeting promises to be one of the most interesting and profitable ones held by this Association. The following are the main features of the program :

Prof. C. H. Hall, Franklin College, Address of Welcome.

Pres. W. H. Senour, Brookville, Inaugural Address.

Dr. Arnold Tompkins, Illinois University.—1. "The Beautiful as a Basis for Literary Study." 2. "Reading and Literature."

Prof. Wilbur S. Jackman, Chicago Normal School.—1. "Relation of Nature Study to the Child's Consciousness." 2. "Methods of Teaching Nature Study," illustrated by pupils' work in painting.

Dr. John A. Bergstrom, Indiana University.—1. "School Hygiene." Discussion and reports of the actual Hygienic conditions of schools. 2. "Child Study." Discussion of reports made by teachers and report of special observations made by Dr. Bergstrom.

Music Section.—1. Miss Belle H. Lowden, Jeffersonville, "Things we Have Done and Things we Have Left Undone." 2. Mr. H. E. Owen, Terre Haute, "How Can Music be Taught in the District Schools?" 3. Miss Beatrice A. Sanders, State Normal, "Public School Music." 4. Round Table.

For information concerning the Music Section, address Miss Jennie Thompson, supervisor of music, Franklin.

A reception will be held in honor of the visiting teachers at the K. of P. parlors on Thursday evening. The lecture on Friday evening will be delivered by one of the leading educators.

Music during the meetings will be furnished by the "Franklin Choral Union," Mr. James E. Vawter, director, and the leading musicians of this city.

RAILROAD RATES.—A rate of one fare for the round trip has been secured from all points in the district. Tickets on sale April 7-8. Good returning until April 11. For information, address Supt. Chas. F. Patterson, railroad secretary, Edinburg.

HOTEL RATES.—Clarendon Hotel, \$2.00 per day. Rooms, with board, in private houses, \$1.00 per day. Places of entertainment may be secured in advance of the date of the meeting by writing to the chairman of the executive committee. For hotel accommodations or information, address Will Featherngill, Chairman executive committee, Franklin, Ind.

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FLAG DAYS.

The School Board of Denver, Colo., has ordered that the flag shall be displayed from the school houses on all national and state holidays, and also on the following days :

1809—February 12: Birthday of Lincoln.

1732—February 22: Birthday of Washington.

1865—April 9: Appomattox.

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- 1775—April 19 : Battle of Lexington.  
1822—April 27 : Birthday of Grant.  
1789—April 30 : Inauguration of Washington and contract signed for the purchase of the Louisiana Territory.  
1607—May 14 : Founding of Jamestown.  
1844—May 27 : First telegraphic message.  
1777—June 14 : Adoption of the flag by Congress.  
1775—June 17 : Battle of Bunker Hill.  
1807—September 2 : First trip of steamboat.  
1783—September 3 : Treaty of Paris.  
1492—October 12 : Columbus discovered America.  
1781—October 19 : Cornwallis's surrender.  
1783—November 25 : Evacuation of New York City by the British.  
1620—December 22 : Forefathers' Day.
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#### INDIANA UNIVERSITY.

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A four page circular of opinions as to the work done in Indiana University has just been issued. Among them we select the following samples : W. R. Harper, President Chicago University says : "The Indiana University has won a high standing through the reputations of the men who have served in its faculty, and from those who have been called elsewhere, as well as through the character of the graduates whom it has sent to other institutions. I believe most heartily that it fully deserves the support of the State which it represents."

John M. Coulter, ex-president of the University says : "I am glad to say now, as I have always said, that Indiana University does more with less money than any institution I know of. It is thoroughly permeated by the right spirit, and has little of that ancient rubbish to impede it which clings about some of our universities. Contentions as to educational methods have been going on vigorously for years, but the observant student can note that there is an annual march of curricula toward the Indiana plan. Of all the interests which come under the Legislature's care none brings a greater reputation to the State than Indiana University, none generates as much force to be used in the State."

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#### NEW MEXICO.

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The Governor of New Mexico has just appointed a Superintendent of Public Instruction. His political party needed one more vote in the legislature and to secure it he appointed a man described as follows : "This man never went to school at all. He was born in Sante Fe in 1846, and when he was fourteen years old entered the army and served for three years as private in Kit Carson's regiment. After the war he went to work in the wool-house of Chick Browne & Co., and worked for eighteen years. The rest of his life has been on a farm."

This appointment was made over the protest of all the educational men

in the State, without regard to politics. The Governor said: "I know he is not qualified but I *just had* to appoint him."

The JOURNAL says: *Keep New Mexico out until she educates her people.*

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#### CUBA IN BRIEF.

Debt, \$270,000,000; population, 1,600,000; revenue, \$25,000,000; expenditures, \$35,000,000; area, 46,000 square miles; white population, 1,000,000; population of Havana, 200,000; population of Holguin, 35,000; population of St. Jago, 27,000; population of Matanzas, 27,000; population of Santiago de Cuba, 70,000; population of Puerto Principe, 46,000; mileage of Cuban railway, about 1,000; average annual export of cigars, 200,000,000; average annual sugar production, 900,000 tons; average annual export of tobacco, 200,000 bales; total exports of Cuba in a year, \$90,000,000; estimated value of the landed estates, \$220,000,000; average sugar exportation to the United States, \$700,000 tons; number of vessels trading with Cuba annually, 2,000; tonnage, 2,500,000.—*Ex.*

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FOREST has the best equipped school building in Clinton county outside of Frankfort. Its high school is for the township and enrolls thirty students. J. W. Hadley is principal.

IN 1891, Mr. Washington Duke gave \$85,000 to Trinity College, Durham, N. C. He has recently offered the same institution \$100,000 provided it opens its doors to women.

BOSTON UNIVERSITY has made a rule that those students who are unwilling to give up tobacco while in the University building may withdraw, and their tuition will be refunded.—*Ex.*

PIKE COUNTY—*The Manual* for 1896-7 contains nearly 100 pages and sets out in a very satisfactory way the school affairs of the county. Supt. John B. Blaize has done some good work.

*The Northwestern Journal of Education*, published at Lincoln, Neb., is making a specialty of "Child Study and the New Education." Its regular price is \$1; both it and the *Journal* will be sent for \$2.

BAKER & THORNTON have issued a supplement to their "*Official Citizen*," giving in full all the laws passed by the last legislature, affecting the office and duties of township trustees. This was a neat thing to do.

PORTLAND.—Superintendent C. L. Hottell has designated Thursday as "Mothers' Day" for visiting his schools. He finds it works well to designate a special day on which mothers are invited to visit in certain grades.

THE TRI-STATE NORMAL SCHOOL, at Angola has opened its spring term with a large attendance. The president says that in this school they do all they advertise to do—and more. For catalogue address the president, L. M. Sniff.

THE annual statement of the Commissioner of Education to the Secretary of the Interior is at hand. It is comprised in thirty-two pages and is made up largely of statistics. These statistics are valuable and will have careful study.

THE WEIS PATENT BINDER is an ingenious arrangement for the cheap binding of magazines in book form. Books thus bound look about as well and cost only about one half the regular binding. Address Weis Binder Co., Toledo, Ohio.

"THE LIVING AGE."—Last month, in making a notice of this valuable magazine, we stated that it annually gave its readers about "one thousand pages" of valuable reading matter. We made a mistake; we should have said *three thousand five hundred pages*.

THE ten largest cities in the world and their respective populations are : London, 4,231,000 ; Paris, 2,447,000 ; New York, 1,801,000 ; Canton, 1,500,000 ; Berlin, 1,579,000 ; Tokio, 1,389,000 ; Vienna, 1,364,000 ; Philadelphia, 1,142,000 ; Chicago, 1,099,000 and St. Petersburg, 1,035,000.

THE SECOND ANNUAL MEETING OF THE INTERNATIONAL KINDERGARTEN UNION will be held in St. Louis, beginning April 20, and the leading kindergartners of the country will be there. For full particulars, address Mrs. Matilda E. Riley, Supervisor of Drawing, St. Louis, Mo.

OWEN COUNTY.—Good word comes from this county in regard to its school work. It has been favored for many years past with enterprising superintendents and a progressive class of teachers. The present superintendent, C. F. McIntosh, is thoroughly competent and devoted to his work, and under such conditions good results must follow.

FRANKLIN COLLEGE has sent out its last catalogue which contains the college calendar for 1897-8. The catalogue sets out all the departments of the college and indicates the work done. This is one of the oldest and one of the most reliable colleges of the State and deserves a large patronage. Dr. W. T. Stott has been for many years its honored president.

VINCENNES UNIVERSITY has opened a pedagogical department and arranged for some good work. President A. H. Yoder has had experience in normal school work and is well qualified to conduct such a department. He has arranged for an extended course of lectures by outside people. Besides these helps there are three regular instructors. The spring term will open April 5.

THE FOURTH ANNUAL MEETING OF THE WESTERN DRAWING TEACHERS' ASSOCIATION will be held at St. Louis, April 21-23. This meeting promises to be one of the most important educational conferences of the year; and like the Indianapolis meeting of a year ago, will bring together the leading art supervisors and special teachers of drawing, and others well known in the field of art and general education.

*The Corydon Democrat* recently published a *souvenir* edition of 12 pages on extra fine paper and extensively illustrated. It gives the pictures of all the important buildings and of many of the prominent citizens. As Corydon

was the first State Capital of Indiana, it has connected with it some important history. The *first State House* and County Superintendent C. W. Thomas make two of the most interesting pictures in the paper.

WEST INDIANAPOLIS has a well selected library of 2,000 volumes and its citizens are justly proud of it. It was started and put under good headway by D. K. Armstrong, the superintendent, but now superintendent of the Knightsville schools. He and all his teachers each gave a day's salary for two successive years. The present superintendent, Andrew Martin, has done what he could to carry the plan to successful completion. "Where there is a *will* there is a way."

THE next annual congress of the Illinois Society for Child-Study will be held at the Chicago Normal School, Wednesday, Thursday, Friday and Saturday, April 28 to May 1. Preparations are well under way for an excellent, interesting, and profitable program. Many prominent educators and specialists in psychology and child-study will be present and take part in the program. The opportunities of this occasion will equal, if not exceed, those of the great congress of a year ago. Send to the Secretary, C. C. Van Liew, Normal, Illinois, for program.

J. H. BACHTENKIRCHER, teacher of penmanship in the Lafayette schools, propounds the following questions, which deserve careful consideration: 1. Is the writing in our public schools what it should be? 2. If not, why not? Who is responsible? How can it be made better? 3. Are you using the copy-books, if so, do you follow the author's instructions? Do you apply movement to the work in grades 4, 5, 6, 7 and 8? 4. Do you favor an illustrated course or series of articles in writing in the JOURNAL? 5. Do you not think a "Writing Section" as a part of the State Association a good thing? I ask the above questions simply as a starter. Will you give the subject the attention it surely deserves.

MADISON.—"No little pleasure and information was given the children of the public schools this week by Superintendent McDaniel. Taking with him some of the high school's laboratory apparatus, he spent an afternoon in each of the school buildings, performing experiments for the delighted young people. Mr. McDaniel's ability in this line of work and his lucid explanations enabled even the younger ones to understand the principles illustrated, and no doubt, increased the desire of many of those who heard him to remain in school till they, too, should know so much about the laws of Nature and her ways of working. If all college graduates make as skillful teachers as our superintendent, we will agree with Dr. Fisher that the State Board should place the college graduate on a par with the Normal School graduate.—*Ex.*

CHILD STUDY CONGRESS will be held at the Indiana University on May 5, 6, 7. Among those who will address the Congress are: President G. Stanley Hall, Clark University; J. H. Kellogg, M. D., Battle Creek, Michigan; Col. F. W. Parker, Chicago Normal School; Dr. C. C. Vanliew, Illinois State Normal; Professor W. O. Krohn, University of Illinois; Professor



Howard Sandison, Indiana State Normal; Professor C. H. Thurber, University of Chicago; Professor G. T. W. Patrick, University of Iowa. The opening session will occur Wednesday, May 5th, at 8 P. M. A rate of one and one-third fare will probably be secured from the railroads. The local executive committee is specially anxious to know by April 1, how many persons are to be present in order that adequate hotel or boarding house accommodations may be arranged for. You are therefore requested to indicate your intention before that date. City and county superintendents are requested to send an estimate of the number who may be expected from their several communities. Address, John F. Newsom, Chairman Executive Committee.

CULVER MILITARY ACADEMY, situated on the shore of Lake Maxinkuckee, has been rebuilt and is now practically fire-proof. Under the management of its new Superintendent, Col. A. F. Fleet, it is prospering beyond expectation. The faculty is strong and the facilities for a school of high grade are ample, and there is no question but Culver Military Academy will in a short time be one of the strong educational forces of the State.

LATER—Culver Academy has purchased the famous troop of black horses that attracted so much attention in Washington, D. C., on March 4. This famous Troop A., of Cleveland, Ohio, mounted on jet black horses was President McKinley's body guard on inauguration day and was the most conspicuous feature of the grand procession. This entire troop of horses about eighty in number had been selected and bought by an expert horseman and it is said that seldom are so many fine horses seen together. The management of Culver Academy believes in having everything the best and so provides its mounted cadets the best horses the country affords. The horses cost the troop over \$10,000. The price to the Academy is not given.

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### PERSONAL.

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S. W. SMELCER has closed his third year as principal of the Thornhope schools.

J. L. DIXON is principal of the West Indianapolis high school. The writer recently spent an afternoon in the school and found it in excellent order.

MISS CORA PARK has resigned her position as teacher in the Ft. Wayne high school and gone to North Carolina where she hopes to regain her health.

J. L. RIPPETOE for many years superintendent of schools at Connersville, but now at Trenton, Mo., would be willing to return to the old Hoosier State if a way opened.

MARION.—Good reports reach us in regard to the Marion Schools. Wellford D. Weaver is one of the most efficient superintendents in the State and no other kind of a report was expected.

JESSE H. BROWN, for many years superintendent of drawing in the Indianapolis schools, gave an illustrated lecture before the Northern Indiana Teachers' Association, held at Elkhart.

J. W. HADLEY is Superintendent of the Forest schools, and has thirty students in his township department. Forest has recently dedicated a new school building, which is complete and adequate.

J. A. CARNAGEY has been unanimously re-elected superintendent of the Columbus schools for the next year. This is complimentary to Mr. Carnagey who deserves recognition for his faithful, efficient services.

C. L. HOTTELL, Superintendent of the Portland school, was born and reared near Wyandotte Cave, Crawford county, this State. Mr. Hottell printed a detailed description of this remarkable cave in *The Sun*, published at Portland.

F. M. BEARD has been retained for another year as superintendent of the Hartford City schools. Mr. Beard has done good work and stands well with the board and the people. He hopes to have a new school building in time for next school year, to take the place of the one burned last fall.

MRS. E. L. DAVIDSON, who has been State Librarian for the past two years, has done faithful and efficient work and retires with the good will of every one who has had occasion to use the State Library. She was a skillful teacher in the Peru schools for many years and will probably go back to the old work.

W. N. HAILMANN, for many years superintendent of the La Porte schools and one of the leading educators of the country, is at present superintendent of Indian schools. He has done most commendable work and it would be a calamity to the Indian school service if the present "administration" should fail to continue him in his work which he now has so well in hand.

JOSEPH CARHART, for many years a prominent educator of this State, has returned to Indiana with a view to making it his permanent residence. He is general agent for the New York Life Insurance Co., and has power to solicit business and appoint agents. His headquarters are in the Indiana Trust Building, Indianapolis. Prof. Carhart has many warm friends in this state who will give him a hearty welcome and wish him success in his new work. Of course, he will be glad to see his friends at his office.

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# Headache

## Horsford's Acid Phosphate

This preparation by its action in promoting digestion, and as a nerve food, tends to prevent and alleviate the headache arising from a disordered stomach, or that of a nervous origin.

Dr. F. A. Roberts, Waterville, Me., says: "Have found it of great benefit in nervous headache, nervous dyspepsia and neuralgia; and think it is giving great satisfaction when it is thoroughly tried."

Descriptive pamphlet free on application to **Rumford Chemical Works, Providence, R. I.** Beware of substitutes and imitations. **For sale by all Druggists.** 7-11

PROF. W. E. HENRY, of Franklin College, has been elected State Librarian and will soon enter upon his new duties. Professor Henry is a graduate of the State Normal, of the State University and has taken a post graduate course at Chicago University. The Board could hardly have selected a better man to start the State Library on its course of greater usefulness.

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### BOOK TABLE.

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"THE TEACHER" is the name of a new monthly edited by the Educational Club of Philadelphia. It is specially in the interest of Philadelphia teachers, but most it contains is of general interest to the profession. It looks well and reads well.

*The Indianapolis Kindergarten* is a new paper published under the auspices of the Indianapolis Free Kindergarten Association. One page devoted to *Child-Study* is edited by Mrs. Lois G. Hufford, of the Indianapolis High School. It is artistic in its make-up and choice in its contents. Price, 1 yr. (9 nos.,) \$1.00.

THE FIRST YEAR NATURE READER, by Katherine Beebe and Nellie F. Kingsley, and published by the Werner School Book Company, Chicago, is one of the most beautiful books of its class yet printed. It is simply yet scientifically adapted to first year work. The illustrations are profuse and many of them beautifully colored. In the first of the book are several pages filled with excellent suggestions to teachers. It will be valuable in the hands of a teacher whether it is used as a text-book or not.

THE April *Century* is a "Grant Memorial number." It contains an article on "The Tomb of General Grant," by Gen. Horace Porter, who did so much to insure the success of the movement toward raising the necessary funds for the monument, and who will be the orator of the day on the occasion of its dedication—April 27—the birthday of General Grant. "A Blue and Gray Friendship," by the Hon. John R. Proctor, describes the long intimacy between General Grant and General Buckner, who surrendered to Grant at Donelson. "Grant's Most Famous Dispatch," the "fight-it-out-on-this-line" letter, is shown in fac-simile for the first time, with an account of the original letter (written to General Halleck) by its present owner.

THE April number of *Harper's Magazine* is particularly attractive both for the interest of the text and for the excellence of the illustrations. It opens with a popular article on "Washington and the French Craze of '93," with illustrations in Howard Pyle's best manner, including a frontispiece in color. "The Martian" develops strongly in interest, and is accompanied by some of Du Maurier's most characteristic drawings. Poultney Bigelow, in the sixth of his series of articles on "White Man's Africa," describes the opening of the Cape Colony Parliament, and considers the effect of the Jameson raid on the relations of the Dutch and English. There are also a variety of articles on topics of present interest, and several short stories, including "The Wisdom of Fools," by Margaret Deland, a study of personal responsibility in modern life.

**EASY PROBLEMS IN THE PRINCIPLES OF ARITHMETIC.**—By Elizabeth T. Mills. *Silver, Burdette & Co.* Price, 60 cts. This is an arithmetic without rules and definitions. The aim of the author seems to have been to furnish a large number of practical examples for the convenience of the teacher and the practice of the pupil. There are thousands of problems graded and carefully prepared. The range of problems is great. Beginning with the four fundamental rules, there follow denominate numbers in all useful applications. Both decimal and common fractions come in for their full share of attention. To percentage are given many pages, including every topic to which percentage applies. Twenty-five pages are given to mensuration and eleven pages to the metric system. It would seem the very book to satisfy the greatest needs of any teacher for supplementary work.

**SHORT STORIES OF OUR SHY NEIGHBORS.**—By Mrs. M. A. B. Kelly. Cloth, 12mo, 214 pages, illustrated. Price, 50 cts. American Book Company, New York, Cincinnati and Chicago. This book is the latest of the "Eclectic School Readings." It tells about the birds, beasts and insects that we might see almost every day—had we but our eyes open. The child who studies this book, however, will learn to watch for all that Nature has to show him. Older books on animals preferred the unfamiliar. They described minutely the ape, the elephant, the ostrich, the boaconstrictor. This book begins at home. It tells of the robin that hops before the window, the mouse that squeaks in the wall. The few technical terms are easy and often repeated. The style is delightful both to children and adults. The science lies not in externals but in the underlying spirit. The illustrations are artistic, attractive and accurate.

**MESSRS. HOUGHTON, MIFFLIN & Co.,** of Boston, New York and Chicago, have just published a revised *Student's Edition* of "A Bird's-Eye View of our Civil War," by Col. Theodore Ayrault Dodge, U. S. A. The book is equipped with 47 maps and battle charts, a glossary of military terms and an index. 12mo, 348 pages, \$1.00, *net*, postpaid. It describes all the important campaigns and the leading characteristics of every army commander of both the Northern and the Southern armies. The *Southern Historical Papers* commended it as "the work of an able, painstaking soldier, who has honestly endeavored to ascertain and frankly to tell the truth about the war." The book has been revised with great care; all figures have been corrected by comparison with the latest war department publications; and the facts stated have been diligently compared with the official records of the rebellion by Capt. Edward B. Robins, for many years secretary of the Military Historical Society of Massachusetts, who has also carefully selected the new maps from government surveys and charts. In its revised form this book will be found more than ever admirably adapted for the use of young people as a clear and concise history of our civil war, and for the mature student of history as a book of reference.

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### **BUSINESS NOTICES.**

TEACHERS and friends can secure General Agency on a salary of \$50 to \$100 per month with Heeb Publishing Co., Indianapolis.

TEACHERS OF INDIANA, do you wish to join a European party which sails July 1st, 1897? Are you willing to do a little work which will help toward the payment of your expenses? Write immediately.

W. AUSTIN PRATT, All Souls Church, Colorado Springs, Colo.

# INDIANA SCHOOL • JOURNAL

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## SOME SCHOOL NEEDS.

[The following excellent address was delivered by SENATOR FREMONT GOODWIN at the opening of the teachers' association at Williamsport in December.]

The State needs better schools ; the schools need better teachers ; teachers need better salaries. Good salaries secure good teachers ; good teachers make good schools ; good schools make a good State. Must we conclude then that it all depends upon the salaries of teachers? Certainly not ; but the salaries paid to teachers have some effect upon the rank of the State in intelligence and morals. Teachers, however, are not always paid according to their worth. The price of a teacher's labor, like the price of wheat or silver, is sometimes, but not always, controlled by the unrepealable law of supply and demand, without regard to the quality of the article offered. Besides, the one who employs and pays for the labor is not always a competent judge of the quality. Such a person is just about as likely to pay a fifty-dollar teacher thirty-five dollars a month, or a thirty-five-dollar teacher fifty dollars a month, or each fifty dollars, or each thirty-five dollars, without regard to the qualifications, as he is to pay them salaries according to the value of the service rendered. No thoroughly qualified teacher is ever paid more than his services are worth ; every poor teacher is paid more than his services are worth. On the average teachers, are paid too little. Considering the amount of preparation required for a first class position, and the time required to be spent in such preparation, I know of no occupation in which the financial compensation is so meagre. To hold

a position commanding more than fifty dollars a month, one must have spent from two to six years in preparation outside of the common school in high school, college or normal school. To hold a position at a thousand dollars a year he must have spent at least six years in preparation in college, or normal school, or both. Contrast with this the doctor's or lawyer's preparation required for the same returns. Two years' preparation is sufficient to permit either to hang out his shingle, and begin practicing upon a confiding public, the one to feel pulses at a dollar a pulse, the other to feel pockets at five dollars a pocket. What doctor would stand from 8:30 o'clock in the morning till 4 o'clock in the evening, eat a cold dinner, walk a mile and a half there and the same back, study three hours on the case after supper, and think of accepting a fee of only two dollars? Rather than accept such a fee he would wait until after the post mortem examination, and administer on the estate. What lawyer would drive three miles into the country to conduct a trial in a justice-of-the-peace court, split the kindling, fire up, sweep out, dust the furniture, plead three hours before a jury, stop twenty minutes for refreshments, consisting of a chunk of cold sausage, a hot onion, a boiled egg, a piece of bread and butter (the latter more or less strengthening) and a cup of ice water, sweep out and dust again, study hard fifteen minutes more, set in again and plead for three hours, go home and study a few hours about what he will do if beaten in the case, then rejoice in the contemplation of a two-dollar fee? But school teachers do just that much for just that much, with much worry and a few bad dreams thrown in for good measure.

There is no other occupation known to man, which persons enter for financial returns, which, to master, requires such broad and such deep research. There is no other occupation in which experience counts for so little in the remuneration obtained. No other occupation requires so great care to avoid mistakes, and no other is fraught with greater responsibility. The teacher with thirty pupils has not one problem to solve, but thirty, not one disposition and nature to study but thirty, not one character to build and life to mould but thirty. How many of us have comprehended our duties? Did we not think that we taught geography when our pupils could bound the states, name the capitals, describe the rivers, locate the mountains, and so on? Did we not

think we were teaching history when we had our pupils learn the numerous voyages of Columbus, the date and the place of the settlements of the thirteen original states, the names of the presidents in order, etc.? Didn't we congratulate ourselves when our pupils could conjugate the verb "love" forward, backward and sideways, active and passive (the tongue active, the mind passive)? And do we not realize now that we are not teaching but simply going through books? The pupils were taken through the books, but scarcely taken into the subjects.

Vast changes have taken place in method of instruction, or rather the method has been discovered and applied. Once it was thought that the natural sciences were for high school and college students only; now you teach them in the primary grades. Punctuation was a division of rhetoric, and we learned the use of the interrogation point after we had completed grammar and arithmetic. A common branch of study was what I should call "Forestry as applied to Anatomy," and few pupils failed to get the opportunity to discern the application. This subject, however, has been displaced by that of the "Science of Teaching."

A serious need of the schools is better school buildings. In this particular the advancement has not been remarkable in rural districts. In some townships there has been no perceptible progress in the last quarter of a century. In many instances the houses of thirty years ago are still doing service. Some of them are neither lined nor underpinned. The health of the child is not safe in such a building. More attention should be paid to the subjects of heating, lighting, ventilating and seating of school rooms. The old system of heating, which is in most cases the present system, consists of an alternate freezing and thawing process. I am sure that the school room can be heated more uniformly and more economically with a furnace than with stoves.

There is a better method of ventilating a school room than by means of cracks and holes in the floor and spaces around the window sash. I once visited in this county a school where even the half of this means was cut off, because the cracks and holes in the floor were stuffed with paper to prevent the odor from arising from the occupants beneath.

The great number of defective eyes among pupils is evidence that the method of lighting school houses will bear improvement. Those who have charge of the building of school houses should

either make a careful study of these subjects as they affect the hygiene of the school or seek and follow the advice of one who has made them a study.

The seating is of next importance. Many persons think a child can sit anywhere. A child can't sit anywhere. It would be nearer the truth to say a child can sit nowhere. While the effort is doubtless made to grade the seats according to the grades in the school, that process does not always meet the requirements of the school. The fact that there are so many round-shouldered, hump-backed, bow-legged, pigeon-toed, slab-sided and knock-kneed young men in the land is due, I believe, in no small degree to the seating of school rooms. The proper kind of seat and desk to use is a seat and desk, both of which are adjustable in height and rotary. Many a boy has had the "acute accent applied to his anatomy" for crawling under the desk simply for a rest from that "tired feeling" due to a too long continuance in one position. Indeed, I think such variations, though I did not appreciate them then, were great hygienic blessings, for they induced a more uniform circulation of the blood over the body.

With good salaries, good teachers, good school buildings we still have needs. The school system of this State, while it ranks high as compared with the the systems of other states, has its imperfections. I shall now consider briefly what I deem needed legislation. I shall not undertake to enumerate all the changes which I think would be beneficial to the schools, but the leading ones and those which are of the earliest necessity.

The Young People's Reading Circle has demonstrated the great value of systematic reading and the early cultivation of the reading habit, as well as the decided advantage of a careful selection of books by competent committees. While in some instances trustees have been liberal in the purchase of these books for the schools, such cases are the exception. Children are expected to buy them but they do not do so to the proper extent, and since worthless literature is easier to secure than good, often the child devours the evil for want of the good. We cannot estimate the value and influence in a school and in a community of a hundred carefully chosen books to which the children may have access under the direction of a judicious teacher. The cost is insignificant when the certain good to be accomplished is considered. Legislation should be passed looking to the immediate establish-



ment and the future maintenance of a library in every school district, with such safeguards as will insure a careful selection of books and the admission of none that is not approved by competent authority.

The subject of teachers' examinations and licenses is deserving of notice. In this connection I shall follow somewhat in line with certain suggestions of State Superintendent Geeting in his recent recommendations to the general assembly. In most respects I endorse his views. In some I do not. Six years in the office of county superintendent taught me that while the mathematical standard for grading manuscripts was uniform throughout the State, the actual standard was far from it. It seems that there were as many standards as there were county superintendents. An applicant for license would fail in one county and succeed in another; or would secure a six-months' license in one county and a two-years' license in another. The means recommended by Mr. Geeting to obviate this difficulty is to provide for the grading of all manuscripts by the State superintendent and his assistants, the county superintendent grading the item "Success" and reporting the same to the State superintendent. Mr. Geeting would also make the license issued State license and valid in any county in the State. I would differ from Mr. Geeting in that the State superintendent be authorized to grade manuscripts for two and three years' licenses only, and grant licenses to successful applicants, and that the county superintendents grade manuscripts and grant licenses to applicants for trial licenses for six months or one year, and that one who has held a license for one year shall be considered as an applicant for a license of a higher grade, and the manuscript of such applicant be graded by the State superintendent, and on failure to secure the higher grade shall be rejected by the State superintendent with the privilege of applying again to the county for a year's license. The making of the two years' and the three years' licenses would be a step in advance of the present system. There is no reason why one possessing the requisite scholarship, experience and training to secure such license in Warren county should not have the privilege of teaching also in any other county without another examination, provided that a competent person granted the license.

I feel disposed to take some exceptions to the law that grants a state license to graduates from a certain State institution and

not to the graduates from any other. There are certain reasons why an exception might be made in favor of the State Normal School, and there are also good reasons why graduates from that institution should meet the same requirements as those from other institutions. Graduates from Purdue University and the State University should not be granted life licenses except by the State Board of Education on the regular examinations, and I am inclined to the opinion that the same requirements should be demanded from the graduates of the State Normal, unless the examination by the State Board for life license be made the test for graduation from the State Normal. To permit a corps of teachers to pass upon the qualifications of their pupils without their qualifications being tested by any other authority, and for those teachers to be permitted to say to their pupils: "As long as you live you may teach in this State without further examination, and without being required to continue teaching," is, to say the least, unfair and unjust to many others who possess as high or higher qualifications.

The law relating to county superintendents should receive some attention. At present any one who can secure a majority of the trustees in the county may become county superintendent. It is possible for a farmer, a lawyer, a doctor, or a person of any other calling to hold the office, though he may never have taught a day, and may know nothing of the science of teaching. I believe there have been cases in the State where the county superintendent could not secure better than a third grade license, and yet these same superintendents are required to pass upon the qualification of high school teachers and city superintendents; and under the ruling of the State Board of Education are required to conduct examinations and grade manuscripts on subjects that they never studied, or turn them over to some one else not authorized to perform such duties. I would advocate then that the legislature fix certain qualifications which a person should attain before he could become eligible to hold this office. These requirements should be a certain degree of scholarship and a certain period of successful experience. The test of fitness for the office, as to scholarship, should be some evidence of proficiency in all the branches of study taught in the public schools of the State. When proper qualifications are established let the people elect him, and not the township trustees, and let him be elected for a term

of four years, and then pay him a salary that will invite the best talent in the county to seek the place.

The means of obtaining a high school education should be afforded to every common school graduate in the State without going outside of his township to obtain it. To afford this means the establishment of township graded high schools. This, more than anything else, in my opinion, would solve the question how to keep the boys on the farm. The present law authorizes the township trustees to maintain high schools in the townships, and all that is needed is a law that will define more specifically the duties of township trustees and make those duties mandatory.

One other need, indispensable to successful school teaching, indispensable to the accomplishment of the purpose of the school, is purity of the teacher's character; not that this is wanting in every case, but that it is essential in every case. The law of the effect of good or evil is the same as the law of heat or light—the influence “decreases as the square of the distance increases.” One's power for good or for evil is greatest upon those to whom he bears the closest relationship. The nearer to the heart of another a person is, the greater is the influence of that person on the life of that other. The more closely two souls are bound together in love, the greater is the influence of one upon the character of the other. The teacher should bear a relation to the child next in confidence and love to that of the parent. His influence, then, for good or evil is next to that of the parent, and sometimes exceeds it, because the teacher sometimes gets closer to the heart of the child than the parent is. How important then, how powerful for good, how essential is purity in the teacher's character.

With fair salaries, good school houses, choice books for teachers and pupils, efficient school laws, worthy and competent school officers, and thoroughly prepared teachers of noble purpose and pure character, what more is needed to make good schools, to turn out good citizens and, out of the last, make a great State?

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Here is May, sweet May—all love her!  
Scatter apple-blossoms above her!  
Joyous May! She gives a nest  
To the waiting yellowbreast.  
Whereso'er her footsteps pass,  
Blue-eyed blossoms deck the grass.

## MUSIC IN THE COMMON SCHOOLS—THE NEGATIVE SIDE.

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W. E. M. BROWNE.

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While much is being done and said to encourage and assist the implanting of the study of music as a branch among our schools, because of its elevating influence upon children, and their government, there is much to contend with, and guard against in the work itself.

It will be the purpose of this article to briefly notice some of the things which make the work of the teacher of music, whether regular or special, an up-hill business, and often a failure.

A prominent trustee of the State said recently: "We want more music in the schools, but the laws must be changed so that we can employ expert assistance in its teaching." Yet there are dozens of schools where the regular teacher holds the key to the situation, and can by the simple act of "recognition," dictate the whole policy of the school.

Take, for instance, a graded school:—The special teacher can not meet with success if the teacher in any room, in the presence of her pupils, evinces indifference to his work in any degree. During the music hour, the opportunity to read a chapter in an interrupted story, or pay a visit to another room is seized, all of which is noted by the pupil and forms one of the drawbacks to the music work and she then wonders why the teacher just across the hall has better singing than she has.

Miss C— is a fine pianist and teaches a primary grade ; she wonders why the supervisor always seems to be dissatisfied with the work of her room and accuses her pupils of being behind the same grades in other schools. One day, inquiry develops the fact that she pays no attention to the lesson as taught or outlined by the special teacher, but follows her own inclination, which the children make note of and construe accordingly. The music work in her room is a failure, for which she quarrels with the supervisor.

Miss B— is a prominent singer and also presides over a double score of ten-year-old urchins. Her pupils sing beautifully, but never seem to *know very much* when the special teacher comes around, and seem utterly lost when anything new is given them.

A blunt inquiry as to why certain things in rotation are not known brings forth the snappish reply, "I don't like your 'do, re, mi's'; I *help* the children, and we know hosts of pretty songs; I learn them at home on my piano." Her room in the final examination is a failure.

Supervisors make the same error by singing with the pupil who soon learns to lean upon the teacher or leader and never does anything for himself; such a room grows weaker every day.

Professor X— is a graduate of the State Normal. He did not "elect" to include the theory of music in his course in that institution, and consequently does not feel competent to announce the time for music and conduct a recitation in that subject. His confession to the school of this inability, and the occupancy of the time with something he *does* know has weakened his room more than he has any idea. To have asked questions concerning things talked of in the book, to have had each exercise sung over and criticized by the pupils themselves would have strengthened him, as well as his pupils, in music, without his having made a single remark in the way of instruction.

A prominent superintendent has said, no primary period should pass without a song, and the grammar grades should sing *twice* a day. This is correct! What then can we expect of the primary room whose teacher is born without music in her soul? We can only sympathize with, and advise her to "get some" somewhere.

One county superintendent in this State told the writer he advised his teachers to take off a slice of scientific temperance if music could not find time otherwise in his schools.

Again, the kind of music given the child to sing has much to do with the success of the work. Children will not become enthusiastic over anything which does not interest them. Many of our text books have nothing in them to interest a pupil or make the music hour enjoyable; abstract solfeggios and untune-ful exercises will not do this, and the music is always a drag where children have nothing but these before them. Words are a necessity, and their selection is of the most vital importance, that the taste of the pupil may not be vitiated.

The tendency of the age is largely towards frivolity and it is only through the most earnest efforts and constant watchfulness of the educators of our country that the tide which is carrying

the coming generation towards a lower standard in many things is stayed and held in check. The teacher becomes not only the guardian of correct ideals, but moreover a creator of higher ideals, thoughts and aspirations for the pupils of the schools.

What can we think then of those who introduce into their readings and studies for the children literature of no merit whatever ; possessing nothing to inspire or uplift the pupil ; and which when recited or listened to has only amused ? The supervisor of music has the greater task of holding back the teacher who thoughtlessly, generally, introduces songs for children, the words of which are either senseless, or totally devoid of proper food for thought, and when sung are a positive harm both musically and mentally to the child.

We might go still farther and say that in addition to carefully guarding the pupils from the frivolous songs so often found in many books and papers, the supervisor should see that poems, abounding in good thought and of a character calculated to create high ideals in the minds of the children, set to such pretty melodies as they will delight to sing, should be furnished to the teachers over which he has supervision, to take the place of much which they use. Public entertainments by school children are to be commended for many reasons, not necessary to state here, but their character should be carefully scanned ; and, unless the pupil is benefited by the ideal or elevating tone of their make-up, the time spent in their preparation is worse than trifled away, and the harm done the school as a whole is far greater than one would, at first, think.

Cantatas which teach a moral lesson, or Bible truth ; operettas emphasizing beautiful traits of character ; anthems which increase the patriotism of children ; songs which point out the beauties of nature, always a desirable factor in the teacher's hand to lead to higher ideals, are to be had and should be the only things musically allowed to be given for *children* to study.

On the other hand, what good, either musically, morally or mentally, can a supervisor expect to do his school by *training* children to sing and act "Pirates of Penzance," or any other of the modern comic operas which have not even the semblance of an "idea" in them ? If we are to fulfil a mission, we surely can not be held guiltless if we create tastes in music which increase the tendency, now far too prevalent, towards frivolity, and

no community was ever benefited by a wave of comic opera fever. Among adults, it is bad enough, goodness knows, but among children, and in our schools the opposition should be prohibitory. Even the musical taste of children may be thoroughly vitiated by the "*jingle, jingle*" music fed to them, so that anything of a serious or uplifting nature can not be sung or enjoyed by them. Teachers can not be too careful in selecting what children should sing, the power of music being such that evil as well as good will be the fruit of their efforts if wrongly directed.

New Castle.

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### EXPERT TEACHING.

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CHAS. A. MCMURRY.

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An expert teacher is one who is supposed to have an unusual amount of knowledge of a subject and a special skill in handling it with classes. Such an expert usually combines with these two advantages *enthusiasm*, and these three things combined (other things being equal) produce excellent results.

Now, is it reasonable to expect that one who teaches all the subjects in one grade, or all the classes of an ungraded school can combine the three above-named merits? That is, can a fairly good teacher, of industrious habits, become an *expert teacher* in all the subjects? It is unreasonable to expect that a teacher in an ungraded school will become a learned specialist in any one science (as is a university professor in one field). On the other hand, no one can be a good teacher of history or geography, without a much fuller knowledge than our usual text books furnish.

Is there, then, a way of specializing upon some of the important topics which will really make the teacher a specialist in their treatment? If, for example, the Rhine River is regarded as one of the important topics of European geography, could the teacher get that fulness of knowledge needed for an instructive treatment of it without too much labor.

Suppose he should treat the following topics :

1. The Rhine in Switzerland.
2. Lake Constance.
3. The broad valley above Mainz (ancient lake basin).

4. The scenic or highland district between Bingen and Bonn.
5. The vineyards and wines of the Rhine.
6. The great fortresses, Mainz, Coblenz, Cologne.
7. The delta and lower Rhine.
8. The commerce of the Rhine and its position in central Europe as connected by canal with the Seine, the Rhone and the Danube.
9. The cities of the Rhine valley. Great cathedrals.
10. The historical suggestions: Cæsar, Charlemagne, Louis XIV, Napoleon I, Franco-Prussian war.
11. Comparison of the Rhine with the Hudson, the Illinois, the James, the Ohio, the Thames and the Danube.

It would doubtless take five or six lessons of thirty minutes each to treat the Rhine River according to such a plan as this. A good deal of the work would also have to be done by oral presentation and discussion in the class as well as by map study and reference work outside the recitation.

The principal question I wish to ask is: Would this require any undue amount of labor and preparation by the teacher? Suppose that in some guide book or geographical reader or in a cyclopedia, we find a ten or twenty page description which it takes an hour and a half to read carefully, just covering the points of the above outline. There is enough good material here for an entire week's interesting and instructive work. Suppose it takes the teacher two hours to master it. She is abundantly equipped now with material enough for half a dozen fruitful lessons, just such material as a specialist requires. It is rich in the kind of special information and descriptive detail which is stimulating to both teacher and pupil. Now, does all this require any greater amount of work for the teacher than the careful preparation of half a dozen lessons, such as are usually assigned in geographies, whether they be map questions or text work?

I am assuming that the teacher is supplied with just that kind of a description of the Rhine which she needs, not too much and not too little. Of course, if the teacher has to spend an hour or more a day hunting for the necessary books and descriptions (and frequently not finding them) my demand would be unreasonable for average teachers. If, however, a teacher can spend the time (usually spent in reading and memorizing dry text books) in working up really rich and interesting topics (being supplied



with just the books and pictures necessary for that purpose) she can become a well-qualified specialist on those topics she needs to teach, combining fulness of knowledge with skill in treatment and enthusiasm in the lessons.

Under certain favorable circumstances, therefore, a common school teacher could be a specialist and would constantly enlarge his knowledge of the subjects and his skill in their treatment. This condition of things does not yet exist with many of our teachers and yet it is a condition towards which we are moving with considerable speed. The larger number of full geographical readers recently published, the monographs on special topics in history, geography and natural science are even now putting a large amount of just the right kind of material in the hands of teachers.

It is well understood that none of our geographical text books contain sufficient descriptive matter to enliven the topics. It remains for teachers to make up this deficiency by reading up, so far as their time and means permit, on the more important subjects and thus gradually accumulate that body of illustrative and descriptive subject matter which will make them specialists. When the suitable books covering just the ground needed are supplied, it will not be difficult to develop specialists even in ungraded schools.

Chicago University.

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### FROM A SCHOOL-ROOM WINDOW.

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E. B. HEINRY.

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"Willie has been very disobedient to-day. He will not study his lessons and his conduct has been unbearable. If he does not do better, I fear he will have to be suspended suspense——"

Why, she was writing that word again! She stopped and read what she had written over and over again. It sounded so harsh and cold, notwithstanding Willie's bad behavior. This matter of writing notes to parents is such a delicate thing at its best; they are so likely to be misunderstood. The teacher laid aside the half-written note and went over to the window.

It was one o'clock; the children were coming back to school. Big and little; clean and dirty; rich and poor—all classes and

conditions. All class distinctions vanish as we approach the school-house door. Three little girls with jaunty tam o'shanters and red jackets pass and greet the teacher at the window with a smile.

They belong in Miss A.'s room and her pupils are all so pleasant and polite! "Miss A. never has any trouble with her pupils," mused the teacher at the window. Then her thoughts turned to Willie—the incorrigible Willie—and she shuddered as she thought of the unfinished note to his mother.

Just then, Willie and his little sister appeared around the corner. Another boy pushed the little girl from the walk into the mud and then ran away. Willie pursued and dealt the rude youngster a blow that sent him sprawling into the gutter, right in front of the school-house door.

"Fighting upon the school grounds is a grave offense and must be reported at once," exclaimed the teacher at the window. She started immediately to perform her duty but stopped when half way to the door and returned to the window. Her thoughts had turned to another little girl of days gone by and a brother who had fought for *her*. He too had been a "bad one" in his school days—almost as bad as Willie. Looked like him, too, although she had never noticed it until now. The more she thought about it, the more clearly she saw that Willie and the other "bad one" of bygone days—her brother—were as much alike as two peas. Strange she had not noticed it before!

The room was filling rapidly and disorder prevailed. Books fell with a crash; slates and pencils clattered and rattled; boys engaged in mimic prize fights and girls made paper dolls from the lithographed note-book covers—but the teacher heeded it not. She was thinking of her school days and the boys she had known—thinking of them *then* and *now*. The "bad ones" had not all gone to "the bad!" Indeed, many of them had become honorable, upright citizens. And the good little boys—the studious, obedient little fellows—what of them? Well, they were not all saints now, to say the least. Both classes had learned a few things not found in the curriculum.

The gong sounded with a harsh unmusical clatter which aroused the teacher at the window from her reverie. She turned to her desk and there lay the unfinished note to Willie's mother. She could not finish it until after the close of school. She picked

it up, folded it slowly, carefully, almost tenderly. A strange, unnatural stillness came over the room as the children gazed upon her anxious, tear-stained face and trembling lips which murmured half aloud: "I will give him another chance." The note dropped softly into the waste basket and Willie's mother escaped a bitter heart ache.

Huntington, Ind.

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## SLAVERY.

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WALTER N. VANSCHOYOC.

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1. Origin of slavery in the colonies.
  - a. In Virginia, page 59 (Indiana History).
  - b. In New York, page 69.
  - c. In Georgia, page 123.
2. How the cultivation of tobacco influenced the growth of slavery in the south, page 57.
3. Extent of growth of slavery in the northern and southern colonies, pages 59, 140, 223.
4. Work of slaves in north, pages 59, 223.
5. Work of slaves in south, pages 59, 223.
6. Feeling in regard to slavery, page 223.
7. Cause of the disappearance of slavery in the north, page 223.
8. Influence of the invention of the cotton gin on the growth of slavery, pages 195-6-7, 223.
9. Provisions for return of fugitive slaves :
  - a. In New England confederacy, page 88.
  - b. In ordinance of 1787, page 187.
  - c. Fugitive slave law, page 267.
  - d. Constitution, article 4, section 2.
10. Fugitive slaves connected with Seminole War, page 221.
11. Compromises made concerning slavery at the time of framing the constitution, page 188.
12. Three great dividing lines between the free and slave sections :
  - a. Mason and Dixon's line, page 105.
  - b. Ohio River, pages 187, 222.
  - c. Parallel of  $36^{\circ} 30'$ , page 225.

13. Slavery in northwest territory, page 187.
14. Influence of the purchase of Louisiana on the growth of slavery.
15. Constitution on restricting the importation of slaves.
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  16. Law restricting slave trade, page 209.
  17. Western extension of slavery, pages 222-5, 266.
  18. Missouri compromise, page 225.
  19. The annexation of Texas, page 255.
  20. How the existence of slavery influenced the desire for growth of our territory, pages 256, 274.
  21. What had slavery to do with the Mexican War.
  22. Influence of the Mexican cession on the growth of slavery, pages 266-7.
  23. Wilmot proviso, page 262.
  24. Omnibus bill, page 267.
  25. Kansas-Nebraska act, page 271.
  26. Struggle for Kansas, page 272-3-4.
  27. Personal liberty laws, page 268.
  28. Underground railroad, page 268.
  29. John Brown's Raid, page 278.
  30. Dred Scott decision, page 275.
  31. How the existence of slavery influenced the tariff dis-sension, pages 223, 224, 240.
  32. How slavery influenced the growth and platforms of political parties.
    - a. Free-Soil, page 262.
    - b. Republican, pages 273, 280.
  33. The doctrine of "States Rights" as strengthened by the slavery question, page 282.
  34. How slavery divided the Union, pages 223, 266, 284.
  35. Whitefield's teachings on slavery, page 123.
  36. Jefferson's views on slavery, pages 209, 223, 282.
  37. Clay on slavery, pages 225, 267.
  38. Webster on slavery, pages 238, 267.
  39. Lincoln on slavery, pages 238, 291, 304, 305.
  40. Dr. Channing, page 238.
  41. Taylor, page 265.
  42. Jefferson Davis, page 281.
  43. Alex. Stephens, page 282.

44. Presidents who owned slaves, pages 209, 267.
45. Other prominent slave owners, pages 267, 275.
46. Abolitionists as a class of agitators, pages 238-9.
47. Work of William Lloyd Garrison, page 237.
48. Petition against slavery, page 239.
49. Uncle Tom's Cabin, page 268.
50. How slavery divided the Union, pages 223, 266, 284.
51. Number of slaves in 1763, page 139.
52. Number of slaves in 1860, page 290.
53. Comparison between free and slave labor, pages 266, 305, 326, 348.
54. How the question of slavery caused the civil war.
55. Slavery, the corner stone of the confederacy, page 282.
56. Strength of and number of free and slave states, page 281.
57. Example of private emancipation, page 275.
58. Butler contrabands, page 290.
59. Fremont's proclamation of emancipation, page 291.
60. Lincoln's proclamation of emancipation, page 304.
61. Its effect on the war, page 305.
62. Negro soldiers, page 305.
63. Amendment to constitution abolishing slavery, page 305.
64. Rights given to negroes by later amendments, page 330.
65. Effect of war on slavery, page 326.
66. Freedmen, page 327, 328.
67. Ku-Klux-Klan, page 336.
68. Education of negro, page 348.
69. Life of Frederick Douglas in Indiana Third Reader.
70. Present status of negro from a moral standpoint.
71. Present status of negro from an industrial standpoint, page 348.
72. Progress of the South since abolition of slavery, pages 347, 348, 305.
73. Work of Booker T. Washington.  
Whiteville, Ind.

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But after the darling May awakes,  
 Bedecked with flowers like a fairy ;  
 About the meadows, the streams, and lakes,  
 She drops them every step she takes,  
 For she has too many to carry.

—Phæbe Cary.

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## DEPARTMENT OF PEDAGOGY.

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### CULTURE AXES (CONCENTRATION CORES) CULTURE EPOCHS.

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R. HEBER HOLBROOK, PH. D.

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A consideration of the nature of the mind, in its simpler phases, should throw some light upon the disputed question of concentration cores and culture epochs.

Speaking roughly, the mind, being a growth, exhibits its leading activities in three principal phases, which correspond to the principal processes of all growing things:—

1. The ingoing, or acquisitional process; whereby the mind appropriates to itself from its external environment the raw material of its own nourishment—that is, *acquires* facts.

2. The inside, or reflectional process; whereby the mind digests or elaborates these raw materials, converting them into materials suitable for the upbuilding of its own tissues—that is, *relations* the facts. This is the “apperception” of the Herbartians.

3. The outgoing, or expressional process; whereby the mind organizes these elaborated materials into its own body or reproduces from them new materials and externalizes them, that is, adds to its own knowledge and externalizes its own thoughts by doing work on other minds and in materials, thus, increasing the general fund of knowledge and forming the trades, the arts, the sciences, etc.—that is, *tells* the facts.

Now, concentration is a pedagogical term, and has reference to the teacher's presentation of the raw materials or facts which form the pabulum of the mind to the mind. Correlation is a logical term, which has reference to the groupings of those facts with a view to their proper concentration by the teacher. They are correlatives, and, therefore, are frequently used interchangeably. The first stands for the *handling* of the facts in teaching; the second stands for the *grouping* of the facts as facts in logical arrangement. Both, of course, have reference to the mind. The first is dynamical, the second is statical. Correlation results in a course of study; concentration results in connecting the course of study with the learning mind. Correlation, therefore, has more

to do with the culture epochs ; while concentration looks more to the culture cores or axes.

All knowledge has long been separated into three groups which are sufficiently clear for practical purposes and which correspond to the principal growing processes of the mind ;—

1. The ingoing, or acquisitional materials, which are especially involved in the ingoing efforts of the mind, and are both the nourishment and the product of these energies—the natural sciences.

2. The inside, or reflectional materials, which afford the materials of and are the results of the reflective energies of the mind—mathematics.

3. The outgoing, or expressional materials, which are at once the food and the product of the expressional energies of the mind—literature, including all the fine arts, mechanical arts, etc.

The lines of demarkation between these divisions are not always clear, any more than are those between animal, vegetable and mineral, for instance. Yet these divisions, as has already been said, have long been recognized and represent the consensus of accepted opinion. The fact that they are pointed out by and correspond with the three principal growing processes of the mind would seem to corroborate the correctness of that opinion, which, it should not be forgotten, is itself also a growth. These divisions should not, therefore, be carelessly discarded and others substituted which are apparently demanded by temporary and perhaps hasty views of education.

Now, since concentration has reference to the management by the teachers of the facts of knowledge, these divisions of knowledge should give reliable suggestion as to the principal centres or cores of concentration. They are, themselves, in my opinion, the centres of all concentration about which all teaching efforts should converge and about which they have long converged. They indicate, not only the primary cores of the matter of all teaching, but of the methods as well. In the primary grades, where concentration is most complete, that is, where one centre can dominate, the knowledge of the physical sciences, (some form of nature studies) takes the lead. The number and language studies lacking content must take their content from the things of nature. During the early acquisitional stage of the mind, the physical facts are the substance from which the forms of number

and language take their origin. The facts cannot become mind without these forms. Discovering these forms in the facts is, indeed, the genuine act of thinking, or of learning. The teacher is not teaching if he does not consciously or unconsciously give content to the forms of number and language from the facts of nature.

In thus receiving their content, do these form-studies become themselves cores of concentration. The content of these forms is the substance or the facts of mathematical and language sciences, which progressively attain rank as cores coordinate with the physical core.

The true object of a general education is to establish in the minds of the pupils the content of the formal studies as furnished by the content of the content studies, so that at last, the former is as rich and real as the latter.

The school training, which does not accomplish this, results in minds crammed with knowledge (perhaps) but incapable of elaborating and reproducing (expressing) more knowledge—in minds which have some power of acquisition, but little of reflection and less of expression.

The stages of the progress of the formal studies toward a normal content received from the content studies, marked by their successive liberation from the domination of the content studies, indicate the three natural culture epochs of the public school course.

The first four, or primary years are dominated by the content studies; since the mind is at this time without content from the external and must busy itself storing up that which is to have form, in order that form may be possible.

But it must not be forgotten that with the first facts that go to make up mental tissue, the forms of number and language are present, for they are a part of them. The one can not exist without the other. Therefore, during this time, the teacher gives his efforts primarily to the substances forming the mind rather than to the forms of the substance and secondarily to the faint gleams of form as they increasingly manifest themselves. In other words, during the primary years, natural science is the core about which the teacher concentrates number and language.

The first four years being thus acquisitional, constitute the *acquisitional culture-epoch* of the mind and so of the course of study.



During these four years, the number forms have received such content as to warrant more distinct recognition during the next four, or grammar years ; abstractions have also become sufficiently real to make reflection more a possibility. The mind now, having more to reason upon, becomes more a reasoning energy. This, therefore, introduces another, and the second critical epoch which the teacher will skillfully recognize.

Upon the judicious training of these germs of reasoning, hangs the future success of the pupil as a reasoning being. Yet, how delicate the task ! Patient recognition, kindly removal of obstacles, orderly supply of the facts, should limit the efforts of the teacher. Attempts at determinate direction, forcible urgings or severe strains are dangerous.

Number now differentiates into a new core of concentration, about which science-knowledge and language-knowledge converge. This individualizing of the number-core constitutes the second or *reflectional culture-epoch*, covering the grammar school years. In addition to arithmetic, algebra and geometry should go to make up the content of the mathematical forms, completing a circle of mathematical knowledge.

During these years, the acquisitional core is not lost sight of in the least, nor is language neglected. While teaching numbers, the teacher must fill them in with the facts of nature, otherwise they remain mere forms without content, figures without facts. He must also, of course, teach the language of numbers, not number baby-talk. One name is as easy to learn as another, and, therefore, let pupils learn at first the correct technicalities.

At the end of the eighth year, pupils should have acquired all the ordinary forms of expression in reading, writing, spelling, grammar, etc. They should read well, write well, express their ideas orally and in writing with facility. Nay, more, these forms should have acquired a rich content in the knowledge and love of literature, drawing, music, etc., so that upon entering the high school, language, as the embodiment of thought, the thought of the pupil and the thought of good authors, has risen to a separate and independent core coordinate with the acquisitional and reflectional cores, but now as truly individualized as they, and forming a centre about which the teacher will concentrate all knowledge. For its enrichment come the keen analysis of the mathematics, the thorough mastery of facts of the sciences. Without these the

teacher trains to the appearance of literary taste, perhaps, but not to literary power and knowledge.

The high school years, therefore, represent the *expressional culture-epoch* of the public school course and should be especially characterized by their literary training. Whatever else is or is not done in these years, literary training should be most prominent, practical and skillful.

All preceding training, acquisitional and reflectional, culminates here in the expressional, with which they are coordinate, to which they are tributary. The expressional training now reaches over into all subjects and receives, in the teaching of all subjects, the clearest attention. To know, but not to be able to tell, is not permitted. To know is to tell, and not to tell is not to know. In every class the telling is the test of knowledge and inability to tell indicates weakness in the acquisitional and reflectional mastery of any subject.

This epoch is the blossoming and fruit-bearing epoch, the epoch of mental reproduction, invention and creation.

While literary expression is the special result of school culture, the manual training-school, it should not be forgotten, trains to expression in iron and wood, the cooking-school in food, the drawing and music in the fine arts; everything in power and willingness to do, in whatever station the pupil may be placed.

After this complete cycle of training, acquisitional, reflectional and expressional, if it has been intelligently accomplished, general education ceases. The boy or girl now enters practical life, or college, a specialist in a chosen career. The increasing electives in college tend to this idea.

I have now indicated what seem to me to be the three principal cores, or culture axes, about which all teaching should always converge and the three culture epochs which divide the public school course.

They have the advantage; first, of corresponding to the three leading mental processes, the ingoing, inside and outgoing; second, of corresponding to the three principal and generally accepted divisions of human knowledge; third, of corresponding to the three principal divisions of the public school course, which is itself the result of long growth; fourth, of corresponding to the principal stages in the development of all growing things; fifth, of corresponding to the three elementary processes of all nerve

action, centripetal or afferent, inside or central, centrifugal or efferent ; sixth, of corresponding to the three principal groups of mental activities, sensibilities, (ingoing), intellect (inside), will (outgoing) ; seventh, of representing, in the cores, a transverse view of the matter and manner of training, and in the epochs, a longitudinal view of the matter and manner of training.

Being thus consistent with and mutually corroborative of so many widely accepted features of school work, are not these three cores, natural science, mathematics and literature and three culture epochs, acquisitional, reflectional and expressional, worthy at least of consideration, if not of general adoption ?

State Normal School Clarion, Pa.

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## **CHILD-STUDY DEPARTMENT.**

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### **IMITATION.**

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"Imitation," says Aristotle, "is innate in men from childhood ; for in this men differ from other animals, that of all they are most imitative and through imitation get their first teaching."

Most of our domestic animals, greatly as they are influenced by man, show little tendency to imitate him or one another—instinct being their guide rather than imitation. In birds, imitation shows itself, but almost exclusively in regard to sound. The parrot and the magpie are noted for the cleverness with which they imitate sounds, both musical and articulate. The mocking-bird is another striking example of the power of imitation in the feathered tribe.

Of all the lower animals, the monkeys are the most distinguished for their mimicry, which extends to most of the actions of the body, and even to the expressions of the face, but which, strangely enough, does not extend to sound ; for it has been observed that monkeys, even when in long captivity, do not attempt to imitate the human voice, but retain their own peculiar sounds for pleasure, pain, anger and joy.

A strong tendency toward imitation has been observed among savages. Darwin says of the savages of Terre Del Fuego : "They are excellent mimics. As often as we coughed or yawned or made any odd motion, they immediately imitated us. They could repeat with perfect correctness each word in any sentence

we addressed them and they remembered such words for some time. Yet we know how difficult it is to distinguish apart the sounds in a foreign language."

The Australians are notorious for being able to imitate the gait of any man so he can be recognized.

Imitation is the result of the exercise of the will. An act can not be reproduced without exercise of the power of volition to a greater or less degree. In children, with the first impulses to imitation, are born the efforts toward significant vocalization. From this time until maturity, imitation is one of the most powerful factors in the development of the child.

The motive that causes the child to imitate is mixed—one question with them is, "Can I do this?" another, "How is it done?"

We are all familiar with cases of the imitated cough, stammering and affected manner of speaking. Young children are very likely to imitate peculiarities of movement which they notice in adults around them—such as the limp, swagger, carrying the head on one side, etc. The imitation of animals is not uncommon—of cats, snakes, kicking like a horse, etc.

The case of the nuns in the convent in Germany, who formed the habit of mewling like cats until the malady spread to such an alarming degree that soldiers were sent to repress the evil by threats of severe punishment, represents an exaggerated form of this childish tendency toward the imitation of the habits of animals. The theater, the wedding, the baptism are all imitated in the childish games.

"A wedding or a festival,  
A mourning or a funeral;  
And this hath now his heart,  
And unto this he frames his song;  
Then will he fit his tongue  
To dialogues of business, love or strife;  
But it will not be long  
Ere this be thrown aside,  
And with new joy and pride  
The little actor cons another part,  
Filling from time to time his "humorous stage"  
With all the persons down to palsied age,  
That life brings with her in her equipage  
As if the whole vocation  
Were endless imitation."

—Wordsworth's "Ode."

The child wants to be a man. His idea of what a man is comes wholly from what he sees of the man in action. Every change in attitude, every new position of the head, every movement of the lips, every gesture of the adult suggests to the child new possibilities within himself. The motor mechanism is set to work and the new act reproduced. The child is more of a man because he has assured himself that he can do those outward acts, which, so far as he is aware, are the content of manhood.

The noting of some of these cases of imitation are valuable to those who are in daily contact with child life. Statistics in this line show that about 80 per cent. of the children examined imitate the teacher more than any other person.

Many children in playing school imitate to perfection any peculiar squint, attitude or mannerisms of the teacher. Every word and action of the teacher is frequently reproduced by the child with his playmates out of school hours. This conscious and intentional imitation is of less value in this study than the examples that are unconscious, but it may throw some light on the understanding which some mothers have of a teacher's ways and character.

A mother writes: "L— until recently had a teacher whose under lip protruded. After a short time, the child held her lips in the same position. When promoted to another room where the teacher holds her lips tightly drawn, she gave up the old habit and goes about with her lips compressed."

A boy of five went to school for the first time. Soon after his mother noticed that he had a peculiar squint when very much in earnest which she found afterwards was a habit he had imitated from his teacher.

A girl writes, "I had a cross-eyed schoolmate. I thought it must be nice to look in two directions at once, and practiced looking in that way until my eyes were seriously injured."

In a certain family, the oldest girl is tongue-tied. She cared for two younger children while they were learning to talk, and although they have no physical defect of the tongue, they talk as their sister does.

A little girl played with a doll that had a crooked mouth. Her mouth acquired the same twist. When she was deprived of the doll, she soon dropped the habit.

In a girls' school, when the lesson had not been well pre-

pared by the class, the teacher spoke a few sharp words. At the close of the lesson, a girl had hysteria; five minutes later, seven others were affected in the same manner.

Enough has been observed, by all interested teachers, to show how carefully the influence along these lines must be guarded to insure the perfect mental, moral and physical development of the child. Many defects of children could be traced to such sources if mothers and teachers were sufficiently interested to study carefully the environment of the child.

The nervous, hysterical child can not be too closely guarded in school, both for her own sake and as a protection to other children who are so ready to acquire these nervous habits. Peculiarities of children and adults may often be traced to the imitation of characters in books which they have read. Many persons who are noted for their clever speeches and original actions, can be very clearly understood by a person who has followed the same or a similar course of reading. In the study of this question, one naturally desires an explanation of the relations of originality and imitation.

As a fact, originality and imitation are not in the least opposed but are in healthy cases absolutely correlative and inseparable processes, so that you can not be truly original in any direction without imitation and can not imitate effectively, worthily, admirably, unless you imitate in original fashions. The greatest thinker, artist or prophet is merely a man who imitates inimitably something in the highest degree worthy of his imitation.

The common confusion of imitativeness with slavishness; the frequent assertion that children and idiots imitate more frequently than do sound and intelligent, reflective adults; the exhortations to teachers, that they shall make their young charges not imitative but spontaneous in thoughts (as if one could become rationally spontaneous except through imitation); all such errors rest on a false separation of imitation and spontaneity, a separation which can be avoided only by a careful psychological study of these interesting processes.

M. S.

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Is this the time to be cloudy and sad,  
When our mother Nature laughs around;  
When even the deep blue heavens look glad,  
And gladness breathes from the blossoming ground?

—Bryant.

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**LEND A HAND.**

(This department is conducted by Mrs. E. E. Olcott.)

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*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

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**FOR THE GEOGRAPHY CLASS—EASTER LILIES.**

Where do the fragrant, beautiful, white lilies come from at Easter time? Perhaps you have heard them called *Bermuda* lilies, if so you have the secret, for 90 per cent. of all the Easter lilies in the United States come from the Bermuda Islands. There are 365 of these islands, just as many as there are days in the year. They are all small and 300 of them are so low that when the winds are high the waves of the stormy Atlantic wash completely over them. If it were not for this they would be covered with lily farms and the lily crop would be 300 times as large as it is now. There are only 12,000 acres of land altogether, in the whole 365 tiny islands, not so much as the smallest county in Indiana. Only 400 acres are cultivated because it is not safe to live on any of the 300 low islands. The inhabited islands are really market gardens for the chief business of the farmers is to raise early vegetables for the markets of New York and Halifax. The lily crop pays better than any other.

A writer says that tens of millions of lilies are grown in the Bermudas. They grow like weeds and if there were a demand for them they could be furnished in great quantities all the year round. But there is a very excessive demand at Easter time and comparatively none for the rest of the year. So the lily farmers have studied and experimented until they have learned how to make the beautiful plant bloom just at the Easter season. They ship thousands and thousands of warranted bulbs to different parts of the United States. So you see the Bermudas might well be named the Easter Lily Islands.

Another author has called them a name not nearly so pretty but very expressive. He said they were "Mosquitoes on Uncle Sam's Coast." He pointed out that since they belong to Great Britain they might be extremely annoying and possibly very dangerous in case of war.

They are only 600 miles due east of South Carolina, and within such easy reach of all the Atlantic Coast, and have such a mild

climate that they are a popular winter resort. From safe harbors there the British war ships could almost destroy our commerce. Within the last year there have been plans under consideration by the British Government for connecting the Bermudas with Halifax by means of a sub-marine cable. In that case, the British man-of-war could be instantly informed of the movements of our vessels, and could intercept them or take advantage of their leaving some point unguarded.

So the tiny Bermudas, the islands of Easter lilies might, in case of war, be a thousand times worse to the nation than the most blood-thirsty mosquitoes could be to individual Americans. We sincerely hope there will never be war with our English cousins, but wide awake patriotic pupils should think of these things while studying geography, so that they may be well informed and farsighted upon questions involving the welfare of our country.

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Where do the finest Easter lilies come from ?

Why do so many bloom at Easter time ?

What else is raised in the Bermudas ?

How many islands are there ?

How many are not inhabited, and why ?

How many acres are under cultivation ?

How far and in what direction from our coast are the islands ?

Why did a writer call them " Mosquitoes on Uncle Sam's Coast ? "

What is meant by " Uncle Sam ? "

What is a sub-marine cable ?

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## TWO NAMELESS STORIES.

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### I.

Humpty Dumpty has country cousins,  
Who come to the city in spring by the dozens ;  
They make such a brilliant show in town,  
You'd think a rainbow had tumbled down.  
Blue and yellow and pink and green,  
The gayest gowns that ever were seen ;  
Purple and gold and oh ! such style,  
They are all the rage for a little while,  
But their visit is short for no one stays,  
After the Easter holidays. — *Youth's Companion.*



## II.

There's a queer little house  
And it stands in the sun ;  
When the good mother calls  
The children all run.  
While under her roof  
They are cozy and warm  
Tho' the cold wind may whistle  
And bluster and storm.

In the daytime the queer little house moves away,  
And the children run after it, happy and gay,  
But it comes back at night  
And the children are fed,  
And tucked up to sleep  
In a soft feather bed.

This queer little house has no windows nor doors  
The roof has no shingles  
The rooms have no floors ;  
No fireplaces, chimneys,  
Nor stoves do you see,  
Yet the children are cozy  
And warm as can be.

The story of this little house is all true,  
I have seen it myself and I think you have too.

—*Tristram's Nameless Stories*, A. Flanagan, pub.

To those who can't guess the name of the queer little house,  
I'll whisper that it is a hen with her brood of chickens.

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DESK WORK—SOME ABSTRACT NUMBER WORK.

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Stripped of all repetition it is surprising to note how few abstract facts in multiplication and division there are to 10 inclusive for pupils to remember. Indeed they are so few that it is well to include the number 12 to afford a desirable variety.

Multiplying by 1 is so simple that most children get it intuitively. With busy work materials they readily show, and easily remember that 1 group of three objects is 3, etc.

As, in addition, a series of problems give almost twice as many corresponding subtracting problems ( $1 + 2 = 3$  gives in subtrac-

tion  $3 - 1 =$  and  $3 - 2 =$ ), so a series of multiplication problems gives almost twice as many in division ( $1 \times 2 = 2$  gives in division  $2 \div 1 =$ , and  $2 \div 2 =$ ).

Therefore the ten multiplication facts from  $1 \times 1 = 1$  to  $10 \times 1 = 10$  give nineteen division facts from  $1 \div 1 =$  to  $10 \div 1 =$  and  $10 \div 10 =$ . Since the average child recognizes and retains these facts so readily they require comparatively little attention.

Besides the multiplication of ones, there are five facts in multiplying by 2 and two facts in three to learn, just *seven* things to remember, viz:

$$\begin{array}{lll} 2 \times 2 = & 2 \times 5 = & 3 \times 3 = \\ 2 \times 3 = & 2 \times 6 = & 3 \times 4 = \\ 2 \times 4 = & & \end{array}$$

Many young teachers would work with more precision if they clearly recognized that these seven facts—are all there is of multiplication up to 12 inclusive (leaving 1 as a factor out of consideration). Show the pupils that two factors always give the same product, no matter which is used as the multiplier. Concrete problems make this clear, as, John drew two large circles on his slate and placed 3 pegs in each circle. James drew three circles on his slate and placed 2 pegs in each. Which had the greater number of pegs?

Which would you rather have 2 times three pears, or 3 times two pears?

The pupils should be required to give original concrete problems. The facts should be presented over and over again in much concrete and a little abstract work till the seven problems are indelibly pictured in the mind. At sight of  $3 \times 4$  the product 12 should rise without the conscious effort to recall it. Pupils should at a glance name the number required in the following:

$$\begin{array}{lll} 2 \times 6 = & 3 \times & = 12 & \times 3 = 9 \\ 4 \times 2 = & 2 \times & = 4 & \times 2 = 6 \\ 2 \times 2 = & 4 \times & = 8 & \times 5 = 10 \\ 5 \times 2 = & 2 \times & = 12 & \times 2 = 4 \\ 2 \times 3 = & 3 \times & = 6 & \times 4 = 8 \\ 4 \times 3 = & 2 \times & = 10 & \times 2 = 12 \\ 3 \times 3 = & 3 \times & = 9 & \times 4 = 12 \end{array}$$

For they are only the same seven multiplication facts variously

presented. The seven facts in multiplication give twelve corresponding facts in division, viz:

$$\begin{array}{llll} 4 + 2 = 2 & 8 + 2 = 4 & 10 + 5 = 2 & 12 + 3 = 4 \\ 6 + 2 = 3 & 8 + 4 = 2 & 12 + 2 = 6 & 12 + 4 = 3 \\ 6 + 3 = 2 & 10 + 2 = 5 & 12 + 6 = 2 & 9 + 3 = 3 \end{array}$$

The calendar-made number builder described in the April JOURNAL may be used for practice work in these problems. The extra 1's and 2's may be pasted to make 12's. Then the request, show all the division facts in 12, would result in,

$$\begin{array}{lll} 12 \div 1 = & 12 \div 2 = & 12 \div 3 = \\ 12 \div 12 = & 12 \div 6 = & 12 \div 4 = \end{array}$$

#### SEPARATING AND COMBINING WORDS.

The pupil will be greatly helped in pronouncing new words and in recalling unfamiliar ones if he has been trained to separate the word into simpler or more familiar parts. This goes hand in hand with phonetic drill.

The following are helpful exercises in this line for pupils sufficiently advanced :

- a. Separate each of these words into two words,

lookingglass	carpet	sunshine
manservant	manor	sunbeam
overboard	raindrop	rootlet
butterfly	lonesome	because
earthworm	keyhole	yourself

Result :

looking	car	sun
glass	pet	shine
etc.	etc.	etc.

- b. Try to find in your reader, ten words that may be separated into two complete words.

- c. Use *any*, *every* or *man*, as a prefix to the words below and form eighteen words :

one	how	trap	hood
body	way	go	kind
thing	day	grove	
where	servant	hole	

## Result :

anyone	everyone	manservant
anybody	everybody	mantrap
anything	everything	mango
anywhere	everywhere	mangrove
anyhow	everyday	manhood
anyway		mankind

Whose home is called

an igloo  
a tepee  
a wigwam?

What is a pagoda

a mosque  
a synagogue?

## PRIMARY DEPARTMENT.

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the Anderson Schools.*

### E. E. WHITE, AS A TEACHER.

In the Prospect school in Cleveland, in 1851, there was a principal of the pronounced dull master type. "Mind what I say and learn it as the book gives it," was his ultimatum—his ideal of the proper method to train character and mind. Among his pupils was a girl of thirteen who had the misfortune to be not only a genius, but one of a very peculiar type. The eyes of her mind were telescopic. She had the sweeping gaze, the daring imagination, the capacity for seeing wholes rather than parts, that mark the great generalizer. But few possess such a vision for the trend and significance of historical events, and such a perception of the spiritual significance of phenomena. Add that she was puny and timid and it is small wonder that Principal X., formed the opinion which he was at no pains to conceal—that the girl was little better than an idiot. As for the child, her soul was congealed and her intellect paralyzed in the presence of the terrible school master, and she scarcely pretended to recite.

But one day there came into the Prospect Street School a very young man "lithe and tall and slender," black haired and grey eyed, with a face at once strong and sympathetic. This was

Emerson E. White, since one of the most famous teachers of the country, but then at the outset of his career. The Prospect Street School was to be divided, and Mr. White was to take charge of the new school on Clinton street as soon as its building should be finished.

Mr. X. courteously invited Mr. White to take charge of the class then in recitation—a class in the ever memorable Colburn's Mental Arithmetic.

"The pupils have their numbers; read a problem and call on some number for the solution," he said.

Mr. White took the book, read out a problem, and called on No. 8 to solve it.

"Oh!" said Mr. X. in disgust, "don't call on *her*; she never can do anything."

Mr. White glanced along the line, and at once identified No. 8—the sensitive, shrinking face drooping in an agony of shame and misery. He grasped the situation at once. "I will read it again," he said, gently, "so that you may be sure you understand it." He read it, slowly and clearly, then walked down the line of pupils and stood by No. 8, so that he was between her and Mr. X., the sight of whom, he perceived, filled her with confusion and terror.

"Now you can do it," he said, reassuringly; and to her own delighted astonishment little No. 8, who had never had the courage to speak an audible word to Mr. X., spoke up distinctly and went through the solution without a hitch.

"The child came home from school that day perfectly transfixed," said her mother. "I could not believe my eyes when I looked at her."

Presently the Clinton Street building was finished, and Mr. White came into the Prospect Street School and read out the names of the pupils who, by the division of the district, were assigned to him. Happy No. 8 was among them, and several other girls who have since become distinguished women, while the boys included Marcus Hanna, also Sylvester Everett, Albert Tuttle, two distinguished citizens of Cleveland, and, in the lower class, John D. Rockefeller and A. L. Bartholomew, now Judge Bartholomew, of Iowa.

One would suppose that even a drill master might have discerned some signs of ability in that collection of young people;

but Mr. X., perhaps vexed at their evident pleasure, made the ungracious remark, as he surveyed the line of pupils :

"I don't begrudge you the lot ; there isn't a scholar among them."

To his utter amazement, and the consternation of the school, timid, silent No. 8 turned in a blaze of indignation and cried :

"How dare you say such a thing ? We will be twenty per cent. ahead of your school in two years ! Mark it !" and walked out of the door.

The gauntlet had been fairly thrown at Mr. X.'s feet, and the Clinton Street School were determined to make good the challenge or perish in the attempt. Perhaps they would have succeeded in any case ; but, considering the material of which most boys and girls are made, it is very doubtful whether their indignation would have held them to the mark for two years of strenuous work if the born leader and organizer had not been on the spot.

Marcus Hanna did not content himself with learning his own lessons. It was no individual triumph but a class victory that was needed, and that could only be won by concerted effort. For six months, by his arrangement and under his leadership, the class met out of school hours to drill each other in their lessons and strengthen the defenses. Emerson White did all that any teacher could to help and direct, but it was Marcus Hanna that kept the class all at work. There was a prize for drawing. Marcus agreed with a certain number of the class to go out early in the morning and sketch from nature. As surely as morning came there was Marcus under their several successive windows, throwing pebbles at the panes to awaken them. In short he organized victory in 1853 as he organized it on a larger field in 1896. No. 8's "Mark it !" was caught up as a sort of class watchword ; and it was partly owing to the frequency and emphasis of Marcus's use of the phrase that his own name was shortened to the abbreviated form it has ever since retained.

The class won, of course. They beat the old school by the stipulated per cent., and Mark Hanna himself took the prize for map-drawing.

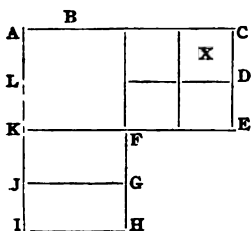
As for little flaxen-haired John D. Rockefeller, in the lower class, *his* lessons were no trouble ; he could learn them in ten minutes, and had abundant leisure and superabundant energy and enterprise to devise mischief. Emerson White frequently request-

ed his kind assistance to put work on the blackboard, and so forth ; but all the resources of pedagogical ingenuity were taxed in vain to find enough extra work to keep John D. Rockefeller out of mischief. In this dilemma, Mr. White said confidentially to some of the girls : " We must all do our best to find things to keep John busy. Now when I send him to help one of you girls with your work, *you must always need help.*" Thereafter when other employment failed, John Rockefeller was usefully occupied in helping some of the girls to solve their problems or draw their maps—to the great advantage of the peace and prosperity of the school. Now, Emerson White, after a long and honored life, three years Superintendent of the Cincinnati schools, charter member and once President of the National Educational Association, etc., etc., is spending his declining years in a beautiful home in Columbus, O., the gift of John D. Rockefeller, in grateful recognition of the teacher who knew how to manage a mischievous boy.

*Samantha Whipple Shoup.*

Dubuque, Iowa.

### A NUMBER EXERCISE.—SECOND GRADE.



Suppose  $A$  to  $B = 3$  miles. How far is it from  $A$  to  $C$ ? From  $A$  to  $I$ ? From  $C$  to  $E$  to  $F$ ? From  $B$  to  $C$  to  $D$  to  $G$ ?

What is the perimeter of the figure?  $\frac{1}{2}$  the perimeter? From  $A$  to what point is  $\frac{1}{2}$  of it? What is  $\frac{1}{4}$  of the perimeter? From  $F$  to what is  $\frac{1}{3}$  of it?

Suppose  $A$  to  $B = 3$  inches. (Questions similar to above.)

Let the space called  $x = 1$  square foot: What is the perimeter of the figure? What is  $\frac{1}{2}$  the perimeter? How many yards in the perimeter? In half the perimeter? What would be the perimeter of the figure if there were nothing below  $KFE$ ? How many in the whole figure?

This number lesson was based upon the idea that number results from a comparison of magnitudes ; that there was a certain large whole to be considered or made definite by comparison with another unit. In one case it was to be determined by measuring it with a unit called 3 miles ; also by a unit called 3

inches ; also by a unit called 1 square foot. This helps to reach the idea that number is a ratio and not a fixed thing.

This number lesson also assumed that these children should be accurate in their sight perceptions and in the actual motor work necessary to measure with a ruler each part about which there was any question. It further assumed that a necessary part was an accurate image, and last, that the conclusions reached should be accurate. These they were required to verify at every point.

At present, this teacher is not worrying over "all the relations" in 8, 12 or 15. In fact she has simplified this part to such an extent that addition is virtually the entire process. If she should ask how many yards of wire fence it would take to go around a plat of ground like the cut, if A to B is 3 feet, she doesn't lose any sleep if the children say it will take 16 yards because it is 1 yard from A to L, another to K, another to J and so on, instead of saying there are 48 feet all around it. Since there are 3 feet in 1 yard, there will be as many yards as there are 8 feet in 48 feet, etc. No, she is not losing sleep if her children don't talk in that way. At present they are talking as *they* see it and not probably as a *teacher* may see it. If a boy has 10 marbles and loses 5, he does not necessarily say 10 less 5, but he says what, in nine cases out of ten children think, that the boy has 5 marbles left because 5 and 5 are 10.

The point just now uppermost in the teacher's mind is to lead the children to accurate perceptions of magnitudes and their relations ; accurate imaging of the same ; and accurate judgments concerning them. She wishes the child's language to show what *he* thinks, and does not care to impose a form of expression that will be misleading or that is not his at all.

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### THE DULL AND BAD CHILDREN.

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"School is going along so well now. I got Willie transferred and Claude has dropped out entirely. Those boys were the worry of my life and I hardly dared dream of being so fortunate as to get rid of both of them." This is a remark of a primary teacher.

If child study does nothing else for the rank and file of teachers other than to make them feel that dull and bad children



are problems to be studied and solved, it will do a great work for the common schools. Dull and bad children are looked upon as only desirable in being gotten rid of. They frequently receive little or no attention except in a fault-finding way; there is no sympathy whatever between them and the teacher; they never receive a word of encouragement.

This kind of work needs no printed slips or syllabi; it needs no course at Clark University with Dr. Hall. But it does require a genuine love for children, an open mind, a willingness to take special pains and patience for results.

A certain teacher who had studied a particular bad boy, from every conceivable standpoint, finally found the cause of his apparent wickedness. He had been especially annoying all day and at the close of the school the teacher sat down by him and said, "John, what is the trouble any way? Why is it, you find it so hard to behave in school?" Poor John, in a burst of confidence, blurted out, "It's cos I'm so derved hungry." Then the teacher knew that John's reformation must begin in his stomach.

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### NEED OF VARIETY.

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Miss Bright was a very successful third grade teacher. Her children were, at all times, polite, industrious and self-helpful. She did not return the following year and one of her little girls writing her, said: "We are very sorry you are not coming back next year and we hope your new pupils won't get as tired of your old brown dress as we did."

This is an actual occurrence.

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## MEMORIAL DAY PROGRAM.

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MAY 30, 1897.

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[Adorn the school room with flowers and the national emblems. Invite the fathers and mothers to be present on the afternoon of May 30. If your school has no flag, make an effort to own one for this occasion. If possible secure pictures of Lincoln, Grant, Sheridan and the men who have been prominent in shaping the destinies of the nation. Place suitable mottoes on the blackboard with red, white and blue crayons. Impress upon the children the lesson of gratitude to the heroes who gave their lives that the nation might be preserved and with them "resolve that these dead shall not have died in vain."]

## 1. SONG ..... America.

Our Patriot Dead, to thee,  
 Our homage full and free  
 This day we bring,  
 Homage that's doubly due  
 To fearless men and true  
 Who dared the right to do,  
 Thy praise we sing.

Our Nation's Dead, to thee  
 Who died for liberty,  
 Thy name we love.  
 We love thy deeds to sing,  
 We love to tribute bring,  
 We love to garlands fling,  
 Thy graves above.

As Patriot's sons, may we  
 True, faithful, loyal be,  
 Thy flag defend.  
 May wisdom crown our land,  
 May Peace and Plenty stand,  
 And Right our land command,  
 Time without end.

—William Woodman.

## 2. RECITATION ..... Our Heroes.

"Men are needed. Are you ready?  
 The battle has begun."  
 Thus the cry rang through the land  
 In the year of 'sixty-one.  
 Every household spared some loved one,  
 Had some vacant chair;  
 Hoped and feared and mourned together,  
 For the one who was not there.  
 Many of those fearless soldiers  
 Marched away to death.  
 Served their country, O, so nobly!  
 Even to their dying breath.  
 Over them we place sweet flowers,  
 And a loving tribute pay  
 To those brave and daring heroes,  
 Who thus gave their lives away.

—S. C. Peabody.

## 3. RECITATION ..... For Grandpa's Sake.

My grandpa went to war long years ago,—  
 I never saw him, but they told me so,  
 And how, after a battle, sad news came,  
 Among the "missing" was my grandpa's name.  
 They never heard of him again, they said,  
 And so we know that grandpa must be dead;  
 And when I think of him so good and brave,  
 I wish we knew where he had found a grave.

When Decoration Day comes, every year,  
I feel so sad, and sometimes shed a tear,  
To see the soldiers' graves all spread with flowers,  
While grandpa cannot have one rose of ours.

So if some little Southern girl should know  
A nameless grave where never blossoms grow,  
I'd love her so, if there some flowers she'd lay,  
For grandpa's sake, this Decoration Day.

—*The Youth's Companion.*

4. READING.....By a Girl.

A traveler recently sought out the grave of Lafayette in the grounds of an ancient convent in the old part of Paris, and was surprised and pleased to find floating above it the Stars and Stripes. Many years ago an American left in his will a sum of money to be used for the purpose of keeping an American flag always flying above the grave. The bequest has accomplished its purpose, and whenever a flag becomes faded and worn a new one takes its place.

For centuries to come the flag of the country that Lafayette aided in its earliest struggles for liberty will wave above his grave, an emblem of that country's gratitude.

5. ESSAY.....The Best Reward of Patriotism.

6. RECITATION.....An Unknown Grave.

In the heart of a southern forest,  
Where the feet of man ne'er tread,  
Is a grass-grown mound which marketh  
The resting place of the dead.  
Here in a sleep so hushed and deep,  
Where but sighing branches wave,  
And the autumn rain, with a sad refrain,  
Falls down on an unknown grave.  
  
He went out in his brave young manhood  
To fight for his country's cause,  
And suffer through toilsome marches—  
E'en die to maintain her laws.  
He battled well—let history tell  
Of the noble life he gave;  
But he rests to-day—so far away—  
Alone in an unknown grave.

—*John J. W. Reynolds.*

7. DECLAMATION.....The Day we Celebrate.

Each loyal pupil to-day feels a thrill of pride as he commemorates the bravery and heroic valor of our brave soldier boys. We feel grateful for the inheritance we have in Old Glory. Its red and white stripes speak to us of

the purity of their patriotism and the courage of their deeds. The stars in the azure field of blue incite us to faith in our republic and true loyalty to our dear America.

May we not soon forget whence come these blessings and this inheritance. May we be constantly reminded that were it not for the unselfishness of those who sacrificed the comforts and safety of home, we could not now be enjoying the blessings of a united and vigorous country. Let us, fellow pupils, respect those living and revere the memory of those dead who for us bared their breasts to the savage missiles of war or who tramped on weary marches and suffered from severe exposure in order that we in peace and plenty, in law and order may do life's work.

8. RECITATION.—*Inscription on the Soldiers' Monument at Waterbury, Connecticut.*

Brave men, who rallying at your country's call,  
Went forth to fight—if heaven willed, to fall!

Returned, ye walk with us through sunnier years,  
And hear a nation say, God bless you all!

Brave men, who yet a heavier burden bore,  
And came not home to hearts by grief made sore!

They call you dead; but lo! ye grandly live,  
Shrined in the nation's love forevermore!

—Joseph Anderson.

9. DECLAMATION.....Lincoln's Gettysburg Address.

Fourscore and seven years ago our fathers brought forth upon this continent a new nation, conceived in liberty, and dedicated to the proposition that all men are created free and equal. Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived or so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field as a final resting-place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But in a larger sense, we can not dedicate, we can not consecrate, we can not hallow, this ground. The brave men, living and dead, who struggled here, have consecrated far above our power to add or detract. The world will little note, nor long remember, what we say here, but it can never forget what they did here. It is for us, the living, rather to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us, that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion; that we here highly resolve that these dead shall not have died in vain, that this nation, under God, shall have a new birth of freedom, and that the government of the people, by the people, and for the people, shall not perish from the earth.



18. "Scatter your flowers alike to-day,  
Over the graves of the Blue and Gray.  
Time has healed all the Nation's scars,  
Peace has hushed all the noise of wars,  
And North and South, and East and West  
There beats but one heart in the Nation's breast."  
—*Mary N. Robinson.*
19. "Dear to each heart are the names of the brave;  
Resting in glory, how sweetly they sleep.  
Dewdrops at evening fall soft on each grave,  
Kindred and stranger bend fondly to weep."
20. SONG.....Onward, Christian Soldiers.  
[For further material for program see May JOURNALS of past years.]

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## EDITORIAL.

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### THE DENOMINATIONAL COLLEGES.

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The attitude of representatives of the denominational colleges toward the late educational bill has attracted much attention and caused no little comment. The JOURNAL wishes at this time to discuss the merits of these colleges and speak of their relation to State education.

The purpose of *all* education, whether State, independent, or denominational, is to elevate the standard of manhood and good citizenship. A good education always does these two things. A state is great not in proportion to its size, or wealth, or population, but in proportion to the quality of its citizenship. An educated, virtuous people are essential to the highest welfare of a state.

Our denominational colleges are engaged in the great work of educating the citizens that make the State, and the quality of their work will compare favorably with the work done in the State institutions. The denominational colleges educate more people than are educated in the State colleges, and they reach a class of people that the State colleges do not reach and can not reach. The theory that all the students in the denominational colleges would be in the State colleges, were it not for the denominational colleges, is not tenable. There are to-day, thousands of men and women in the State enjoying at least a partial college education, who would never have gone beyond the facilities offered by their home schools, had it not been for *our* minister, and *our* college agent, and *our* denominational paper, and *our* colleges.

These colleges are doing a great work, not only for the denominations that support them, but for the State. And let it be remembered that they are doing this without cost to the State. This being true, it follows that the State should recognize this valuable service and reciprocate in every possible way. It would be inexcusable to discriminate against these colleges, which are doing what it would cost the State thousands of dollars each year to do for itself.

Having said this much and said it heartily, the JOURNAL wishes to say that it does not know of any instance in which the State has consciously legislated against these colleges.

It is true that for many years there has been a contention between the high schools and the colleges. The high school authorities have contended that they must make a course of study that will best fit students for life. They have noted the fact that only a small per cent. of high school pupils ever attend college and have insisted that the work of the high school should be to prepare for life and not for college. And they have contended further that this preparation did not include Greek and probably some other subjects required for entrance to college. They have urged that all the colleges should take these students where the high school leaves them and complete their education.

The State colleges have consented to do this, but most of the other colleges have declined. Now, when the State Board "commissions" high schools, and their graduates are guaranteed admission to the State institutions, it looks on its face, as though this was discrimination against the non-State colleges, but it is not. These colleges have themselves, alone, to blame, if they do not get their full share of high-school graduates.

If there is anything *settled* in education it is that a course of study should not be arranged with reference to the future. The central thought in the report of the Committee of Ten is that a course of study should be so arranged as to give to the student the greatest possible development at each successive stage. It insists that what is best for the child to-day, is the best possible preparation for to-morrow. That which best prepares a child to stop, best prepares him to go on. That which best prepares him to step out best prepares him to step up. That high school course which best prepares a student for life, best prepares him for college. If the best preparation for life requires Greek to be taught in the high school, or even in the grammar grade it should be taught there. Everybody, high school teachers, superintendents, college men, both State and non-State, should join in an effort to formulate the best possible high school course—the one that will give to its students the greatest possible development, and when this is done, then every college in the State should throw its doors wide open to receive graduates from this course. Every college should rearrange its curriculum so as to take these students and carry them forward regularly, without a break and without a jar.

Will the college men join in this movement? The college is made for the student not the student for the college.

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#### DECISION REGARDING PURCHASE OF READING CIRCLE BOOKS.

The decision of the Appellate Court in regard to the purchase of Reading Circle books by trustees has produced not a little comment among teachers and others interested.

Geo. M. Ray sold to the trustee of Adams township, Madison county, five hundred books for \$500 and received township warrants in payment for

same. The new trustee refused to pay the warrants on the grounds that the books were not worth the money and that the trustee under the law was not authorized to make the purchase.

The lower court decided that the purchase was not authorized by law and the Appellate Court sustains the decision.

The newspapers in speaking of this decision have referred to the books purchased as "Reading Circle" books. This gives a wrong impression. Not one of the books belonged to the Reading Circle list, and the price paid was far beyond the Circle prices.

It is a great outrage that the Reading Circle should be made to suffer on account of unscrupulous agents who undertake to trade on its good name.

The decision says: "Black-boards, charts, maps, tellurians, dictionaries, books of reference, etc., are a class of articles, apparatus and books which are not required for each individual scholar, but one of each would be sufficient in most instances for the whole school, and could be used by the teacher in giving instructions to the pupils. No person being required to furnish such common property for the benefit of the whole school, they can only be supplied by the trustees."

Under this ruling it looks as if the legitimate Reading Circle books ought to come in. Only one book of each kind is bought, and each book is for use by the entire school, and all are used under the direction of the teacher.

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#### THE NORTHERN AND SOUTHERN ASSOCIATIONS.

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The Northern Teachers' Association held this year at Elkhart, was the largest educational gathering ever held in the State. The *paid* enrollment reached exactly *fifteen hundred*. Dr. De Garmo, who gave the evening address said that it was the largest educational meeting he had ever seen, outside the National Association. The meeting was full of enthusiasm and the program gave general satisfaction. Supt. W. R. Snyder, of Muncie, made an excellent presiding officer. Supt. D. W. Thomas, of Elkhart, had anticipated a large meeting and had organized his forces so that everybody was comfortably cared for, and all went away delighted. Supt. W. C. Belman, of Hammond, was chairman of the executive committee and proved a capital manager. When the hammer fell on Thursday evening that called the first meeting to order, he had a paid-up enrollment of *eleven hundred fifty-four*. The Northern Association has all the "sections" organized that belong to the State Association, and they were all largely attended.

The Southern Association met a week later, at Franklin. It was large—very large—larger than any State Association ever held, but not so large as the Northern. The enrollment was six hundred twenty-five. The weather was exceedingly unfavorable and doubtless had something to do with the attendance. This, however, did not put any damper on the enthusiasm of those present. The program was a good one, as reference to the report of the meeting will show. The Music Section is the only appendage this Association has and the regular sessions were not adjourned for it. W. H. Senour, superin-



tendent of Franklin county was president and acquitted himself with credit. Will Featheringill, superintendent at Franklin, did his work well and gained the good opinion of every teacher present.

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#### THE EXAMINATION OF CITY SUPERINTENDENTS.

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The JOURNAL does not agree with that phase of the late educational bill which required city superintendents to hold licenses. The city superintendent must be an educated person. Most superintendents to-day are college graduates. Fortunately, in most places, politics are not allowed to have undue influence. The person selected is not required to be a resident of the city, county or State. In short, superintendents are chosen because of their eminent fitness, and their chief fitness no examination would show. No other state makes such a demand, and so there is a free and frequent interchange of superintendents among the states. In this way, Indiana has lost many and has gained many.

Suppose Indiana had such a law and then some city should select Dr. W. N. Hailman and Dr. E. E. White, or Lewis H. Jones, or United States Commissioner W. T. Harris as its superintendent. He could not accept till he had applied to the State Board and secured a license. Such men would not submit to such an ordeal. Examinations are a good thing but can be carried too far. It might be proper to have a law requiring somebody to examine the State Board of Education.

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#### PROFESSIONAL COURTESY.

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At this season of the year it is well to say a word on "Professional Courtesy." It has grown to be a *law* that no superintendent will become a candidate for a place so long as the present incumbent of a place is seeking reappointment. School Boards should learn that no self-respecting man will apply for a position and try to displace a fellow superintendent. School Boards should first settle the matter with the incumbent and if a change is to be made let that be definitely understood. When a board has officially said that a place is vacant or will be vacant at a given time, other superintendents will feel free to consult in regard to it.

This unwritten law that now exists among superintendents should prevail among teachers. A teacher who has taught a good school has earned the right to teach it again, and it should be considered a gross breach of courtesy for another teacher to apply for the place before it is vacated.

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#### ELECTION OF COUNTY SUPERINTENDENTS.

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On the first Monday of June will expire the time for which all county superintendents in Indiana were elected. At present, a large majority are Democrats, but as a large majority of the trustees are Republicans, it is probable that many changes will take place. The JOURNAL has always contended that superintendents should not be selected on political grounds, but

on their merits as school men, and it has not changed its opinion on this point. It is a shame that competent, tried men should be set aside, simply because they do not happen to vote the political ticket voted by a majority of the trustees.

The superintendent has more to do with the vital interests of the county than does any other county officer and he should be selected solely on the ground of his fitness to discharge the responsible duties that must rest upon him.

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### MOTHERS' MEETINGS.

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For years kindergartners have been holding mothers' meetings, but more recently "mothers' meetings" have been held in many places, and for all grades of school. These meetings assume different phases in different places, but they have common characteristics. The purpose is to bring parents—especially mothers—and teachers together for mutual consultation and discussion in regard to school work. In some instances teachers prepare papers to read, and at the conclusion of the reading ask for questions and discussions. In other instances, especially after the first meeting, parents are asked to prepare papers. In this way parents will get the teacher's view, and the reasons for certain rules and requirements, and on the other hand the teachers will get the mother's side of various school questions. In many places these meetings have proved a great success and resulted in much good. They should be held in every community.

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THERE are several hundred teachers whose names yet stand on the *unpaid* list. Are you one of them? If so, just think of the poor editor.

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CONNECTICUT has done a generous and *just* act in appropriating \$4,000 to Henry Barnard, the Great Educator. Dr. Barnard was contemporaneous with Horace Mann, and next to him, did more for public school education in this country than any other man. He did a great work for Connecticut and the country, and the legislature now recognizes Dr. Barnard's great services and makes this expression of its appreciation.

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DO NOT forget the N. E. A. to be held at Milwaukee next July. Do not forget that Indiana is going to make an effort to have a large representation there. Do not forget that it will have a State headquarters at the principal hotel. Do not forget that the railroads will sell a round-trip ticket for a single fare, *plus* the Association fee. Do not forget that W. R. Snyder, of Muncie, is State manager and will answer all questions—if he can.

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PLEASE do not act on the principle that the editor of the SCHOOL JOURNAL is infallible and that he never makes a mistake. And if he does make an occasional mistake, and send a "reminder" when the subscription has been paid, please do not call him hard names and treat him as though he was dishonest and trying to defraud you. Sometimes the agent makes a

mistake or forgets; sometimes the fault is in the JOURNAL office; and sometimes subscribers are mistaken. Recently after a *severe* letter it turned out that the writer of the letter was wholly to blame. Let us be charitable and let us be courteous.

## **QUESTIONS AND ANSWERS.**

### **STATE BOARD QUESTIONS USED IN MARCH.**

**GUIZOT'S HISTORY OF CIVILIZATION.**—1. Summarize the points of contrast between the cities in the 12th and those of the 18th century.

2. Were the cities free or servile during the feudal regime? In what sense? How did the cities grow during the feudal era?

3. How did the cities gain enfranchisement? Results of the enfranchisement of cities:

(a) Unchanged relation to the government.

(b) Formation of a new class in society.

(c) Struggle of classes.

4. Discuss the internal government of the cities.

5. What influence put an end to the crusades?

6. How did the crusades affect the relation of the laity to Rome?

7. What was the influence of the crusades on the small fiefs? On centralization? (Any four.)

**SCIENCE OF EDUCATION.**—1. The process of advancing from the inspection of particulars to an understanding of general notions or concepts, is called what?

2. What are some of the laws of the process described in question one?

3. To what extent does this process have a place in teaching?

4. How does deduction differ from induction?

5. "The value of knowledge depends not only upon the distinctness and accuracy of the ideas, but also upon the closeness and extent of the relations into which they enter." Show that this is a sound principle of education.

6. On what does good memory depend? (Any five.)

**GRAMMAR.**—1. How does the sentence differ from the clause? Illustrate.

2. State how each word is used in the following: "Bring forth another horse," he cried aloud. "Another horse!"

3. Illustrate in sentences four uses of a phrase.

4. Illustrate the difference between the use of the adjective and the adverb. Explain.

5. Use the word "as" as an adverb and as a conjunction.

6. How would you present the subject of case to a class? What material would you use? (Any five.)

**HISTORY.**—1. What were the chief public acts of the administration of Jefferson?

2. Sketch the career and give an estimate of the character of John C. Calhoun.
3. What were the Alabama claims, and how were they settled?
4. What has been the effect upon American public life of our unsettled public lands?
5. Discuss the history work of the first three years in the State course of study.

READING.—1. "The reading act is the act of getting meaning from written or printed language; it is an act of interpretation, of looking into and through symbols for the thought they express." Discuss the above quotation. 10

2. Lesson 15, page 74, First Reader is as follows:

- (1) "You can see *that John* and *Kate* seem to have fine fun.
- (2) They are *running* a race to the fence.
- (3) See how Kate's eyes *shine*! I think she is going to *win*.
- (4) Look out, look out, John! or you will be *left*.
- (5) If John does not go very fast his little *sister* will be first."

The words in italics are new to the class. Explain how you would teach these words to a class. 10

3. Name five books suitable for supplementary reading in the fifth grade, giving reasons for the selections. 10
4. Do you think the work of simplifying classic selections for use in primary grades profitable? Why? 10
5. Give a brief analysis of the poem, "Thanatopsis." What is the lesson taught? 10
6. Read a selection to the county superintendent. 50

SCIENTIFIC TEMPERANCE.—1. Tell how a piece of muscle or brain or any animal tissue is affected by being placed in alcohol? Does the specimen thus treated weigh more or less than it did before? Why?

2. Does water undergo any chemical change in the animal body? What is the use of water in the animal body?

3. How does the alcohol affect the red corpuscles of the blood?
4. How does the excessive use of alcohol affect the kidneys?
5. Will beer slake thirst? Why?
6. Are the evils ascribed to tobacco due to the nicotine?
7. Why is the smoking of cigarettes considered more dangerous than the use of tobacco in any other form? (Any five.)

PHYSIOLOGY.—1. What importance do you attach to the study of physiology in the public schools?

2. What is the source of muscular energy?
3. Whence is the mineral matter of our bones derived?
4. Explain the function of respiration.
5. When does the heart rest?
6. What is the action of the gastric juice upon foods?
7. Why is it dangerous to swallow grape seeds?

8. Describe the eye, and illustrate by diagram.
9. What actions are controlled by the spinal cord? *(Any five.)*

ARITHMETIC.—1. What is a unit? When do several things constitute a unit? Name a unit which may include several things.

2. From 9000 take 7685. Write complete explanation as though given to a pupil taking the work for the first time.

3. Upon what does the value of a fraction depend? Wherein does  $\frac{1}{4}$  of a dollar differ from  $\frac{1}{8}$  of a dime.

4. Explain the process of finding the prime factors of 84.

5. Of a certain kind of cloth, 29 in. wide, 12 yds. are required for a dress. How many yds. would be required if the cloth were 35 inches wide, provided the two kinds cut to equal advantage?

6. Find the area of a circle in sq. yds., if its diameter is 4.05 yards.

7. A man sold a horse for \$150, 30% of which was gain. What was the cost and what was his gain per cent.?

8. I bought a bill of goods for \$864 on 4 months' credit, but being offered 5% off for cash, I borrowed the money at a bank by having my note payable in 117 days, discounted at 6%, and paid the bill. What was the face of the note, and how much did I gain?

9. Discuss the first year's work in arithmetic as outlined in the State Manual.

10. "Teach the form and name of sphere and hemisphere, cylinder, cone, cube, prism, square, triangle, lines, points and so on."—State Manual. Show how number work may be introduced by doing the above work.

GEOGRAPHY.—1. Why are London and Liverpool great cities?

2. What is the Japanese current and how does it affect the climate of the Pacific coast of North America?

3. What are the trade winds? How caused?

4. What effect have the Andes mountains upon the climate of Brazil?

5. Name and locate four important seaports on the Pacific coast of the United States and name five of the principal exports of that region.

6. (a) To what race do the natives of British India belong and what is their religion? (b) Name and locate five of the most important cities of British India. *(Any five.)*

#### ANSWERS TO PRECEDING QUESTIONS.

HISTORY OF CIVILIZATION.—1. In the 12th century the cities were fortified. The inhabitants fixed their own taxes, elected their own magistrates, etc., *i. e.*, were sovereign; but the burgesses, as respects the nation, were nothing.

In the 18th century, the cities were not fortified; burgesses (previous to 1789) had no voice in the government, in the levying of taxes, in the election of their officers, etc. The power, or authority, was the king, who ruled through his agent, or steward. The cities at this time were much more cultured and wealthy than they were in the 12th century.

2. During the feudal regime, the cities were servile in the sense that

they were under the arbitrary rule of the great proprietors, the lords, whose actions were heavy and frequent. They were free in the sense that they largely controlled their local affairs, and that frequently, they successfully resisted the encroachments of authority, and in course of time gained their enfranchisement.

The cities grew through the influence of the revival of industry and commerce, and through the coming in of refugees; to some extent they grew by persons considering them as places of greater security and sociability.

3. In every individual bosom was a feeling of independence that prompted its possessor to revolt against tyrannical authority. This spirit was continually manifesting itself in insurrection, an action that soon spread everywhere. Where it was successful, charters, more or less liberal, were granted to the cities. Though frequently violated, though the lords frequently tried to reinforce their exactions, thereby renewing and prolonging the struggle, the freedom of the cities was at last consummated.

Though the cities had gained enfranchisement, the burgesses still had no intercourse with the general government, except when the king was called upon judiciously to settle some dispute between them and the barons. (P. 203-204).

The country now being "covered with men engaged in similar pursuits, possessing the same views and interests, the same manners and customs," as a result there was gradually formed a great social class—a middle class—"made up of the merchants and traders, distinguished on the one hand from the nobility, on the other from the laborers and peasants."

As civilization advanced, there were gradually formed different classes in society, based on the different ideas that were held in regard to government, business, religion, etc. The love of authority, or power, brings about a struggle of classes—"a struggle which constitutes the very fact of modern history, and of which it is full." (See p. 205).

4. The international government was a pure democracy, all the inhabitants taking part. In the course of time these became divided into a lower and an upper class of burgesses. The former were quite difficult to govern; the latter were timid, cautious, and very desirous of harmonizing all differences whether with the king or with his turbulent element. At last through persistent effort and good example, the better element prevailed.

5. See page 235 in Guizot.

6. The Crusades brought multitudes of the laity into closer connection with Rome, which became a halting place for many of the Crusaders either in going or returning. They became thoroughly acquainted with the different actions and attitudes of the church, and the motives which inspired them. As an important result, the laity thereafter kept themselves in close connection with the church, which, in turn, wisely respected and cultivated this increased acquaintance with its affairs.

7. They greatly diminished the number of small fiefs, because the proprietors, in order to raise money for the Crusades, were forced to the necessity of selling their fiefs to the kings. (See p. 233-234). They concentrated property and power in a smaller number of hands; they created a number

of central points in society in place of the general dispersion which previously existed.

SCIENCE OF EDUCATION.—1. The process of induction.

2. (a) *Observation* of particulars. (b) *Comparison* of resemblances that have been detected. (c) *Classification* of objects that are similar.

3. This process has the most prominent place in teaching because it is the road to the solution of the puzzle that nature puts to every child. Her secrets are to be detected by prying deep into individual facts, and reflecting upon the relationship of things to each other in their nature, appearance, and cause.

4. They are as opposite poles. Induction is the process by which we arrive at a general truth from an examination or study of particulars. Deduction is the process by which we arrive at a particular truth, from its relation to, or dependence upon, a general law.

5. Ideas that are not distinct cannot be concisely expressed in words, nor can they be used in gaining other ideas for they are unreliable. Ideas that are not accurate will constantly lead us into error.

Knowledge is made up of ideas as units; hence it is evident that if the relationship among these ideas is close, the knowledge will be clear and compact; and if the relationship is widely extended it will be comprehensive, and therefore all the more valuable.

6. Good memory depends upon a careful, systematic, and constant cultivation of that faculty. It weakens by inactivity and becomes unreliable by a use of it that violates its laws of growth.

SCIENTIFIC TEMPERANCE.—1. Alcohol hardens and preserves all animal tissue. It preserves by abstracting the water and destroying the germs of putrefaction. It hardens by abstracting water and coagulating albumen.

The specimen thus treated contracts in volume, and weighs less than it did before because the water which it contained has been abstracted. The alcohol in the specimen weighs less than the same amount of water.

2. Water is not chemically transformed in the body.

Dr. Edward Smith thus sums up the uses of water in the body: "First, to soften and dissolve solid foods so as to facilitate their mastication and digestion; second, to maintain a due bulk of blood and the structure of the body; third, to keep substances in solution or suspension whilst moving in the body; fourth, to supply elements in the chemical changes of the body; fifth, to enable the waste material to be carried away from the body; sixth, to discharge superfluous heat by transpiration through the skin, and by emission through the other outlets; and seventh, to supply in convenient form heat to, or to abstract heat from, the body. Some of these functions are performed by water in its liquid state, and others in a state of vapor."

3. Possessing very strong solvent properties, alcohol acts most perniciously upon the red corpuscles, dissolving the iron out of them in whole, or in part, and occasioning the formation of black, oily specks. The corpuscles become considerably altered in shape, and instead of being plump and round, become flattened, elongated and pale.

4. The excessive use of alcohol first overworks the kidneys, then

hardens them; their minute structure undergoes fatty modifications; their vessels lose their due elasticity and power of contraction; their membranes permit to pass through them that colloidal part of the blood which is known as albumen.

5. On account of the large amount of water which it contains, beer will slake thirst to some extent.

6. The evils ascribed to tobacco are due chiefly to nicotine. The waste of saliva is one evil not so caused.

7. Because of the low grades of tobacco that are used, and because there is mixed with it various substances exceedingly injurious to the system, such as opium and its extract, morphine.

HISTORY.—1. The chief public acts of the administration of Jefferson, were :

(a) The Purchase of Louisiana from France for \$15,000,000.00 (1803); it more than doubled the area of the United States.

(b) The War with Tripoli (1801 to 1805), after which we paid no more bribes for peace.

(c) The Bill for the construction of the National Road from Maryland to Ohio.

(d) The appointment of John Marshall (1801) as Chief Justice of the United States Supreme Court ; he served till 1835.

(e) The Embargo Act (1807) which forbade any vessel to set out from the United States for any foreign port.

(f) The sending of an overland expedition under Lewis and Clarke to explore the great west (gone twenty-seven months).

(g) Admission of Ohio, February 19, 1803.

2. John Caldwell Calhoun was born in Abbeville district, South Carolina, March 18, 1782. He was educated partly in the North and partly in the South, and was admitted to the bar in 1807. He took part in a meeting of the people denouncing the British outrage on the frigate "Chesapeake," and was soon elected to the legislature, and entered the house of representatives in November, 1811, in his thirtieth year. He was a member of the committee on foreign affairs ; favored the war of 1812 ; the tariff of 1816 ; and a system of internal improvements of roads and canals. On these questions, he afterward modified his views very greatly but defended his real consistency of thought, under the appearance of inconsistency, by saying that the remedies proper for one condition were improper for others. In 1817, Monroe called Mr. Calhoun to the War Department, which he filled until 1825. He organized the department by a bill that he drew for the purpose ; and, under the rules prescribed by him, introduced order and accountability in every branch of service, and established a system that has survived, in a large degree, to this day. He was elected vice-president in 1824, and re-elected in 1828. His vice-presidency marks the beginning of his life as a constitutional statesman. "The station, from its leisure, gave me a good opportunity to study the genius of the prominent measure of the day, called then the American system, by which I profited." The bank, the protective policy, the internal improvement system, and the "general wel-



fare rule" for constitutional construction, composed this celebrated policy. Calhoun favored free trade, low duties, no debt, separation from banks, economy, retrenchment, and strict adherence to the constitution. The South Carolina convention in November, 1832, passed the ordinance nullifying the tariff laws of 1828 and 1832, and Calhoun was elected to the Senate and took his seat in December, having resigned the vice-presidency. He gave up the second and surrendered all hope of the first office in the country to defend his state in her solitary attitude of opposition to the protective policy. The vacancy in the State Department, occasioned by the death of Judge Upshur in 1844, was filled by Mr. Calhoun who had ceased to be senator in 1843. He vindicated our rights in Oregon in a diplomatic correspondence upon grounds on which it was finally adjusted by the treaty in 1846. In 1847, he asserted his belief that the constitution by its own force carried slavery into the territory conquered from Mexico. He died in Washington, March 31, 1850.

"He had the basis, the indispensable basis, of all high character. If he had aspirations, they were high and honorable and noble. There was nothing grovelling, or low, or meanly selfish, that came near the head or the heart of Mr. Calhoun."—*Daniel Webster*.

3. The Alabama claims were claims against the British government for damages done to our commerce during the Rebellion by the Alabama and other Confederate privateers built or equipped in English ports. Great Britain paid the United States \$15,500,000 in settlement of these claims. (See the *Indianapolis Journal* of March 29, 1897, for a detailed account of this matter.)

4. The effect of our unsettled public lands upon American public life has given rise to:

(a) The question of their sale and settlement. At one time this brought about the issue of the Specie Circular, which partly caused the panic of 1837.

(b) The question as to whether they should be free or slave. This caused many years of heated discussions in congress; in part effected the passage of the Missouri Compromise, the Omnibus bill and the Kansas-Nebraska bill; and finally brought about the Civil War.

(c) The question as to the fate of the Indian, in regard to which there have been several plans proposed and some mistakes made.

(d) The question as to whether the general government should aid in constructing railroads through them.

Our unsettled territory is now confined chiefly to forest reserves and Indian reservations, and is not likely again to raise any questions of public interest or importance.

5. See the State Manual.

PHYSIOLOGY.—1. The study of physiology in the public schools is a means of pleasure and of intellectual culture and growth; it affords a basis for the further study of living organisms; and gives that knowledge which if applied properly will be a guide to the preservation of health. (See p. 11 Adv. Phys.)

2. The oxidation of muscular tissue is the source of muscular energy. "The oxidizable substances are in the cells and are drawn from the food." (See p. 116-117).

3. The mineral matter of our bones is derived mainly from food which contains phosphate of lime and carbonate of lime, the chief mineral constituents of bone. Of all common articles of food, milk contains most phosphate of lime; hence one great reason of its value as a food for children.

4. The function of respiration is the purification of the blood, by furnishing it with oxygen; and relieving it of the carbon dioxide.

5. The heart rests between the contraction of the ventricles and that of the auricles; the length of the rest is about half the time from one systole to another.

6. The gastric juice acts mainly upon the albuminoids (proteides), and changes them to albuminose (peptones); this action is due to a digestive substance called *pepsin*. (See p. 144).

Gastric juice has no action upon starch, nor does it affect fatty substances.

7. They may lodge in the appendix vermi-formis and cause serious inflammation, which may result in death.

8. See text-book, p. 280, etc.

9. The spinal cord controls the reflex actions of the parts to which the spinal nerves are distributed; as, the neck, arms, back, pelvis, and lower limbs.

**GEOGRAPHY.**—1. London is a great city because it is the capital of the greatest commercial nation of the world. It is in the midst of a fertile country, backed by extensive mineral deposits, and is near the mouth of a river, opening broad and deep to the sea.

Liverpool is a great city because it is so situated as to command much home and foreign commerce, and is the natural outlet of the great manufacturing district surrounding it.

2. The Japanese current is that branch of the Pacific ocean current flowing eastward from South America along the equator, which turns northward at the Phillipine Islands skirting Japan and the eastern coast of Asia. It then turns to the right and moves southward bathing the western coast of the United States, producing a moderation of temperature and furnishing considerable moisture to the coast states.

3. The trade winds, so named "from the steadiness with which they follow a path across the sea," prevail within the Torrid Zone and a few degrees beyond it. This zone being the most highly heated, the rarefied air ascends, and flows off north and south as upper currents; and the cool air from regions north and south rushes in as under currents to preserve the equilibrium. There are thus established two sets of air currents or winds—two warm, north and south upper currents, and two cold north and south surface currents. But for the earth's rotation, there would be a constant north wind at the surface in the northern hemisphere, and a constant south wind at the surface in the southern hemisphere. But these north and south winds can not partake all at once of the more rapid rotation of surface towards the equator, and are diverted to the west, thus becoming northeast and southeast winds respectively.

4. The trade winds, from the sea, pass across Brazil and carry a great amount of moisture toward the Andes, where it is condensed by the cold highlands, before it passes over them; hence a great amount of rainfall and the Amazon River.

5. Olympia, latitude  $47^{\circ}$ ; San Francisco, latitude,  $37^{\circ}$ ; Los Angeles, latitude,  $34^{\circ}$ ; San Diego, latitude,  $33^{\circ}$ ; Seattle, on Puget Sound; Portland, on the Willamette river. Gold, wheat, lumber, salmon and fur-seal skins are some of the exports of this region.

6. "The schedules of the census fail entirely to give a satisfactory classification of the races among which the vast population of India is divided. Using languages as our criterion, the people might be divided into five classes: (1) The old races of the south, known as the Dravidian stock, which includes, not only the great peoples using the literary languages of Tamil, Telugu, Malayálam, and Kanarese, but also scattered tribes speaking dialects of the same family, who are found as far north as the hills of Chutiá Nágpur; (2) the hill tribes of Central India, from the Bhils of Bombay to the Santáls of Bengal, whose physical characteristics are negroid, and whose family of languages has received the name of Kolarian; (3) the tribes of Indo-Chinese origin, who inhabit the southern slopes of the Himálayas, the greater part of the Assam valley, and the whole of Burmah; it seems probable that the semi-Hinduized low castes of Northern Bengal also belong to this stock; (4) high-caste Hindus or that offshoot of the august Aryan race which has imposed its language, its religion, and its name upon the greater part of the country; (5) successive waves of Mahometan conquerors, Arab, Alfhán, Mughal and Persian, who form in the aggregate but an infinitesimal element in the general population.

"Broadly speaking, it may be said that at least nineteen out of every twenty people in India are either Hindus or Mahometans, and that there are seven of the former to two of the latter."—*Ency. Brit.*

ARITHMETIC.—1. A unit is *one*, a single thing, or a definite quantity. Several things or parts constitute a unit when they together equal a unit, or form an idea that may be taken as a unit in the measurement of something else.

The square foot, as a unit, includes 144 square inches. A set of dishes, as a unit, is made up of several individual dishes.

2. See any good text-book on arithmetic. There are two methods—the "carrying method" and the non-carrying method. Each of them admits of a clear explanation, but the "carrying" method is preferable.

3. The value of a fraction depends upon the relation between the numerator and the denominator, for the value equals the quotient of the numerator divided by the denominator.

4. See text-books.

5.  $9\frac{1}{2}$  yds. Ans.

6.  $(4.05)^2 \times .7854 = 12.88 + \text{sq. yds.}$  Ans.

7. 30% of \$150 = \$45, the gain. \$150 — \$45 = \$105, the cost. \$45 is 42% of \$105.

8. \$864 — 5% of \$864 = \$820.80, cash for goods. \$1 — \$.02 = \$.98,

proceeds of one dollar. \$820.80 contains \$.98, 837.55 times; hence the face of the note is \$837.55 +. \$864 - \$837.55 = \$26.45 + gain.

9 and 10. See State Manual.

GRAMMAR.—1. A sentence is a group of words expressing a *complete* statement. A clause is a part of a sentence and contains at least one subject and one predicate. In the sentence, "When they came to countries where the inhabitants were cowardly, they took possession of the land," the portion, "where \* \* cowardly" is a simple clause; and the portion "when \* \* \* cowardly," is a complex clause, because it consists of a principal part and a subordinate part.

2. "He cried aloud" is the principal proposition, of which "aloud" is an adverb; the direct object of "cried" is, (you) "Bring forth another horse," "Another horse," a noun clause, of which (you), understood, is the subject; "bring" is the predicate, "forth" is an adverb modifying "bring," "horse" is the direct object of "bring;" "another horse" is an appositive expression used for the sake of emphasis; "horse" here being in the objective case to agree in case with "horse" the direct object of "bring."

3. A phrase may be used *adjectively*, as in the sentence, "Carelessness in the use of money is a vice;" *adverbially*, as in the sentence, "He has labored in vain;" *independently*, as in the sentence, "O, the times! O, the manners!" *substantively*, as in the sentence, "John's father opposed his going to sea."

4. The difference in the uses of two classes of words is found in the difference of the ideas which these classes are used to express.

The adjective is used to express the ideas of—

- (a) *appearance*; as, She looks *neat*.
- (b) *condition*; as, She feels *bad*.
- (c) *quality*; as, That *large* tree is *strong*. etc., etc.

The adverb is used to express the ideas of—

- (a) *time*; as, He will come *soon*.
- (b) *place*; as, *Where* thou goest, I will go.
- (c) *manner*; as, He walked *leisurely*.
- (d) *degree*; as, They came *too* early. etc., etc.

5. In the following, the first *as* is a simple adverb, and the second *as* is a conjunctive adverb: "She sang *as* merrily *as* a lark on a spring morning."

In the following, *as* is used as a conjunction: "As retreat was now impossible, Colter turned the head of the canoe."

6. Choose, as your material, a list of sentences illustrating the different cases; then, by appropriate questioning, lead the pupils to see the uses of the different substantives and their relations to the governing words. After the ideas are developed, then give the names, and work out the definitions, the pupils, at each step, doing the work for themselves, and the teacher simply guiding by question or suggestion.

READING.—1. The quotation needs no discussion. All that is necessary is strongly to endorse the statement. A warning might be given to some teachers who have never been thoroughly worked up to the true idea

of what constitutes reading, and who have erroneously thought that simply *pronouncing* the symbols is reading.

2. New words are taught—

- (a) by their likeness to other words that have been given before;
- (b) by first presenting to the pupil's mind the idea embodied in the word; then giving the word.

3. *Franklin's Autobiography*. Ginn & Co.'s Edition. This book is valuable to young people on account of the lessons in life found on almost every page.

*Everett's Ethics for Young People*. This book treats of the common, every day duties to one's self and to others.

*Irving's Sketch Book*. Edition of Allyn & Bacon, Chicago. In this book the pupil will become acquainted with one of the most charming writers America has ever produced.

*Good Reading for School and Home*. Published by Leach, Shewell & Sanborn, Chicago. This book contains selections in the lines of biography, history, geography, and general literature, and is very valuable for the great amount of miscellaneous information given, as well as for the choice literature contained.

*Buckley's Fairyland of Science*. Gives a line of reading, both useful and entertaining.

4. If the work is done well, and the ideas embodied are appropriate and not too difficult of comprehension, then the simplifying of the selections for use in primary grades will give us material that will pay richly to use.

5. Thanatopsis is a view of death as presented by nature. In the poem nature is personified.

The first two paragraphs suggest that what we learn from a proper study of nature should be a consolation and a support to us "when thoughts of the last bitter hour" come over our spirits.

The third paragraph presents the fact that death and dissolution are inevitable.

The fourth paragraph sets forth the magnificence of the burial couch and the grandeur of the company the dead has joined.

The fifth paragraph describes the earth as the tomb of man.

The sixth paragraph contrasts the small number of the living with the immense multitudes who "have laid them down in their last sleep."

The seventh and eighth paragraphs set forth the idea that death must be the fate of all.

The ninth paragraph urges the duty, and sets forth the grandeur, of meeting death bravely, nobly and willingly.

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THE WINONA SUMMER SCHOOL to be held at Eagle Lake, a suburb of Warsaw, will be held from July 19 to August 13. It will be conducted under five different departments, viz: College, Method, Music, Art and Physical Culture. Dr. John M. Coulter will have charge of the school, and the method department will be directed by W. A. Millis. Both kindergarten and primary model schools will be conducted by expert teachers. See advertisement on another page.

## FOOD FOR THOUGHT.

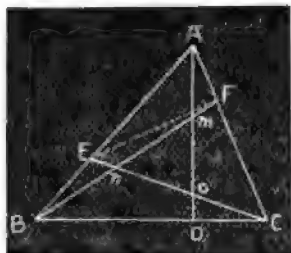
[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by May 18. Be prompt. Write only on one side of your paper.]

### SOLUTIONS TO PROBLEMS.

Problem 163, proposed by the I. H. S. Math. Club, has received considerable attention. Three solutions were published in the April issue. We give below two additional solutions.

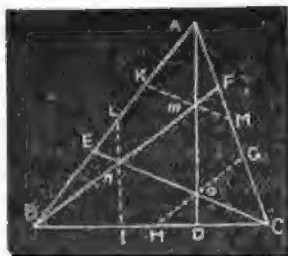
**PROBLEM 163.**  $ABC$  is any triangle. Take  $AF = \frac{1}{3} AC$ ;  $CD = \frac{1}{3} CB$ ; and  $BE = \frac{1}{3} BA$ . Connect  $FB$ ,  $AD$  and  $EC$ . Let  $AD$  intersect  $FB$  at  $m$ , and  $CE$  at  $o$ , and let  $CE$  intersect  $FB$  at  $n$ . Find the area of  $mno$  in terms of  $ABC$ .

Solution by PROF. A. H. LYBYER, Orchard Lake, Michigan :



$mno = ABC$ ; or,  $ABC - \frac{1}{4} ABC + mno = ABC$ ; therefore,  $mno = \frac{1}{4} ABC$ .

Solution by JOHN C. GREGG, A. M., Brazil :



Let  $AF = FG = GC = \frac{1}{3} AC$ ; let  $CD = \frac{1}{3} CB$ , and  $CH = \frac{1}{3} CB$ ; connect  $BF$ ,  $AD$  and  $GH$ ;  $GH$  will be parallel to  $BF$ , and let it meet  $AD$  in  $o$ ; through  $o$  draw  $CE$  cutting  $BF$  in  $n$ , and  $AB$  in  $E$ ; through  $n$  draw  $IL$  parallel to  $AD$ ; through  $m$  draw  $KM$  parallel to  $CE$ ; since  $GH$  is parallel to  $BF$ , we have  $Am = mo$ , and  $Co = on$ ; and, since  $IL$  is parallel to  $AD$ , and  $Co = on$ , we have  $CD = DI$ ; therefore  $DI = \frac{1}{2} BC$ , and  $BI = DI$ , and  $Bn = nm$  and  $BL = AL$ , and  $L$  is the middle point of  $AB$ ; again, since  $KM$  is parallel to  $CE$ ,  $BE = EK$ , and  $AK = EK$ ; therefore  $BE = EK = AK = \frac{1}{3} AB$ , and  $M$  is the middle point of  $AC$ ; now,  $EL = \frac{1}{2} EK = \frac{1}{2} AL$ , and, as  $Ln$  is parallel to  $AO$  in triangle  $AEO$ ,  $En = \frac{1}{2} no$ , or  $\frac{1}{2} nC$ , and  $no = \frac{1}{2} EC$ ; now, since  $mo = Am$ , the altitude of triangle  $mno$  is  $\frac{1}{2}$  that of  $AEC$ , and  $no = \frac{1}{2} EC$ ; therefore, triangle  $mno$  is  $\frac{1}{2} \times \frac{1}{2}$  or  $\frac{1}{4}$   $AEC$ ; but  $AEC = \frac{2}{3} ABC$ ; therefore,  $mno = \frac{1}{4} \times \frac{2}{3}$  or  $\frac{1}{6} ABC$ .

**PROBLEM 174.** If 30 men can dig  $80^{\circ}$  cubic yards in 40 hours, how many men, who are stronger in the ratio of 3 to 5, would it require to dig 120 cubic yards in 45 hours, supposing the ground in the latter case is harder than the former in the ratio of 8 to 9.

**Solution by JOHN MORROW, Charlestown :**

$$\left. \begin{array}{l} 5:3 \\ 80:120 \\ 8:9 \\ 45:40 \end{array} \right\} :: 30 : x ; \text{ solving, } x = 27, \text{ the number of men.}$$

**PROBLEM 177.** Given  $\sqrt{x^2 - \frac{a^4}{x^2}} + \sqrt{a^2 - \frac{a^4}{x^2}} = \frac{x^2}{a}$ , to find  $x$ .

**Solution by J. C. DICKERSON, Goodland:**

$$\sqrt{x^2 - \frac{a^4}{x^2}} + \sqrt{a^2 - \frac{a^4}{x^2}} = \frac{x^2}{a} \dots\dots\dots(1).$$

Transposing (1),  $\sqrt{\frac{x^3 - a^4}{x^3}} = \frac{x^2}{a} - \sqrt{a^2 - \frac{a^4}{x^3}} \dots\dots\dots (2).$

Squaring (2),  $x^2 - \frac{a^4}{x^2} = \frac{x^4}{a^2} - \frac{2x^2}{a} \sqrt{a^2 - \frac{a^4}{x^2}} + a^2 - \frac{a^4}{x^2} \dots\dots\dots(3).$

Clearing (3),  $a^2 x^2 = x^4 - 2ax^2 \sqrt{a^2 - \frac{a^4}{x^2}} + a^4 \dots\dots\dots(4).$

Transposing (4),  $x^4 - a^2 x^2 + a^4 = 2ax^3 \sqrt{a^2 - \frac{a^4}{x^2}}$  .....(5).

Squaring (5),  $x^6 + a^4 x^4 + a^6 - 2a^2 x^6 + 2a^4 x^4 - 2a^6 x^2 = 4a^4 x^4 - 4a^6 x^2 \dots\dots\dots (6).$

Transposing (6),  $x^8 + a^4 x^4 + a^8 - 2a^2 x^6 - 2a^4 x^4 + 2a^6 x^2 = 0 \dots\dots (7).$

Extracting square root of (7),  $x^4 - a^2 x^2 - a^4 = 0$ .....(8).

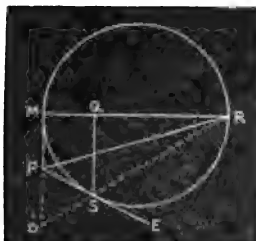
Transposing (8),  $x^4 - a^2 x^2 = a^4 \dots\dots\dots (9).$

By quadratics,  $x^2 = a^2 + \frac{\sqrt{a^4 + 4a^4}}{2} = \frac{a^2(1 \pm \sqrt{5})}{2}$

$$x = +\frac{a}{2} \sqrt{2(1+\sqrt{5})}.$$

**PROBLEM 179.**  $MR$  is a diameter of a given circle, and  $PM$  a tangent. Draw another tangent  $PS$  and draw  $SQ$  perpendicular to  $MR$ . Prove that  $SQ$  is bisected by  $PR$ .

**Solution by OTTO CLAYTON, Fowler :**



Let MR be the diameter, etc.; produce MP to D, and draw DR through S; angle ESR = angle PSD = angle PDS, all measured by arc RS; PD = PS = PM, so that MD is bisected by RP; QS is bisected also since it is parallel to MD and contained in the triangle MRD.

ANSWERS TO OUERIES.

53. What is meant by the "Virginia and Kentucky Resolutions?"—  
JOHN MITCHELL, Remington.

The Kentucky resolutions of 1798, were introduced in the Kentucky

Legislature in that year by George Nicholas, but Thomas Jefferson is now known to have been the author. They were directed against the Alien and Sedition Laws, and against acts passed to punish frauds on the Bank of the United States. They opposed broad construction of the Constitution, and affirmed that instrument to be a "compact," each State being one party, "its co-States forming as to itself the other party." These resolutions and similar ones, prepared by James Madison, passed by Virginia in 1799, were submitted to other States for their approval, but such States as returned answers expressed non-concurrence in the views there formulated. The Kentucky resolution of 1799 repeated the former statements regarding the Constitution, and entered a solemn protest against the abuses complained of.—(Dict. of Amer. Pol., Brown and Strauss).

54. What is the International Date Line and explain?—MARK ASHLEY, Logansport.

The common day, often called the civil day, lasts from midnight to midnight,—twenty-four hours. In order that the civil day may have the same number or date the world around, the leading nations have agreed to use the date of the days as they begin on the 180th meridian. For example, the fourth day of July begins on the 180th meridian at midnight following the third of July. We may think of the new date as traveling westward with the midnight. This date is given to each place as soon as the midnight reaches it. When vessels cross the 180th meridian, they either drop a day or add one to the calendar. As the new date begins on that line, a vessel sailing eastward across the line goes out of the area having the new date and must therefore add a day to the calendar. The meridian of 180°, at which all new civil days begin is called the "International Date Line."—(Frye's Geography).

55. Were the Quakers exempt from service in the late war, and if so, why?—A. WEAVER, Scircleville.

The Quakers were not exempt. The Conscription Bill passed by Congress provided for the possible service of all able-bodied citizens between the ages of 18 and 45.

56. Please explain through the JOURNAL the nature of the X-ray. Be definite.—JOHN BRUCE, Indianapolis.

Will some of our physicists give us a good answer to the above query?

### SOLUTIONS REQUESTED

*(Solutions that are requested will always receive prompt attention.)*

INDIANA COMPLETE ARITHMETIC, page 284, Ex. 46:

$4 + 3 + 5 = 12$ , of which A has  $\frac{1}{2}$ ; B,  $\frac{1}{3}$ ; C,  $\frac{1}{4}$ .

A gets  $\frac{1}{2}$  for 10 mo.; or for 1 mo.  $\frac{1}{20} = \frac{1}{2} \times \frac{1}{10}$ ;

B gets  $\frac{1}{3}$  for 14 mo.; or for 1 mo.  $\frac{1}{42} = \frac{1}{3} \times \frac{1}{14}$ ;

C gets  $\frac{1}{4}$  for 18 mo.; or for 1 mo.  $\frac{1}{72} = \frac{1}{4} \times \frac{1}{18}$ ;

Dividing \$10,252 into parts to each other as 84, 75, and 35, we get \$4,439.01, A; \$3,963.40, B; and \$1,849.59, C. B's share of the gain is  $\frac{1}{3}$  of \$6,300 = \$2,100; \$3,963.40 + \$2,100 = \$6,063.40, B's share of the stock; \$6,063.40



—\$4,329 = \$2,259.40, left for A and B, by C withdrawing. Divide this into parts to each other as 84 and 35 and the results are \$1,594.87, A ; and \$664.53, C. (See JOURNAL of July, '95.)

PAGE 284, Ex. 48 :

$$\begin{aligned}\frac{1}{3} &= \text{part A, B, and C do in one day.} \\ \frac{1}{15} &= \text{ " B, C, and D " " } \\ \frac{1}{4} &= \text{ " C, D, and A " " } \\ \frac{1}{6} &= \text{ " D, A, and B " " }\end{aligned}$$

Hence,  $\frac{1}{15}$  = part 3A, 3B, 3C, and 3D do in one day.

Or,  $\frac{1}{15}$  = " A, B, C, and D do in one day.

From this, subtracting  $\frac{1}{3}$ ,  $\frac{1}{15}$ ,  $\frac{1}{4}$ ,  $\frac{1}{6}$ , we have respectively,  $\frac{1}{60}$ ,  $\frac{1}{20}$ ,  $\frac{1}{60}$ ,  $\frac{1}{60}$ , the parts D, A, B and C do in one day. The money may be divided proportionately to what each one does in one day, as they all work the same time. Adding, we get  $\frac{1}{15}$ ; hence the shares will be  $\frac{1}{6}$ ,  $\frac{1}{15}$ ,  $\frac{1}{15}$ ,  $\frac{1}{6}$  respectively, of \$152, or \$56, \$24, \$32, and \$40. (See JOURNAL, Feb. '96.)

PAGE 284, Ex. 50 :

$$\begin{aligned}\frac{1}{8} &= \text{part A does in one hour;} \\ \frac{1}{12} &= \text{ " B " " " } \\ \frac{1}{14} &= \text{ " C " " " }\end{aligned}$$

Adding,  $\frac{1}{804}$  = part A, B, and C do in one hour.

$1 + \frac{1}{804} = \frac{805}{804}$  (hrs.) time it takes all to do it.

$\frac{805}{804}$  times  $\frac{1}{8} = \frac{1}{8}$  = part A does.

$\frac{805}{804}$  times  $\frac{1}{12} = \frac{1}{12}$  = " B "

$\frac{805}{804}$  times  $\frac{1}{14} = \frac{1}{14}$  = " C "

$\frac{1}{8}$  of \$29.50 = \$7.00, A's share.

$\frac{1}{12}$  of \$29.50 = \$12.00, B's share.

$\frac{1}{14}$  of \$29.50 = \$10.50, C's share.

### PROBLEMS.

180. Construct a quadrilateral, being given two opposite angles, the diagonals, and the angle between the diagonals.

181. Equal weights of gold and silver are in value as 20 to 1, and equal volumes are in value as 1284 to 35. A certain volume is composed of equal weights of gold and silver. Find how many times more valuable it would be were it composed of gold alone.

182. Required the greatest possible number of hills of corn that can be planted on a square acre, the hills to occupy only a mathematical point, and no two hills to be nearer than  $3\frac{1}{2}$  feet.

183. Two trains, one  $a$  and the other  $b$  feet long, move with uniform velocities on parallel rails; when they move in opposite directions, they pass each other in  $m$  seconds, but when they move in the same direction the faster train passes the other in  $n$  seconds. Find the rate at which each train moves.

184. Given a triangle whose sides are respectively one-third of the medians of a second triangle. Find the area of the first triangle in terms of the second.

185. A point P being given on the base of a triangle, draw a line across the triangle parallel to the base, which shall subtend a right angle at P.

186. A banker borrows a sum of money at 4 per cent. per annum, and pays the interest at the end of the year. He lends it out at the rate of 5 per cent. per annum, and receives the interest half-yearly. By this means, he gains \$100 a year. How much does he borrow?

187. In a half-mile race, A gives B 10 yards start, and beats him by 20 yards; B gives C 30 yards start in half a mile, and is beaten by 60 yards: which runs the faster, A or C?

188. If a terrestrial globe were made 36 inches in diameter, find the size on its surface of France, which contains 200,000 square miles, the earth's diameter being 7,920 miles.

189. If the hands of a clock coincide every  $65\frac{1}{2}$  minutes, how much does the clock gain or lose in 24 hours?

190. If 91 men, 28 women, and 35 boys can reap a field of corn 85 yards by 23 yards, in 4 days of 10 hours each, how many women must be associated with 13 men and 5 boys to reap a field 69 yards by 17 yards, in 21 days of 8 hours each?

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#### CREDITS.

John Morrow, Charlestown, 165, 169, 170, 171, 174; John C. Dickerson, Goodland, 174, 177; Otto Clayton, Fowler, 179; A. H. Lybyer, Orchard Lake, Mich., 163; J. C. Gregg, Brazil, 163.

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## OFFICIAL DEPARTMENT.

### *To the County Superintendent:*

The county high school examinations will be held on the last Saturdays of May, June and July, 1897. These examinations are for the superintendents, principals and teachers of the commissioned, non-commissioned and township graded high schools of the State, except superintendents whose salaries are paid wholly from the "Special School Fund," and holders of State licenses and diplomas from the State Normal School.

Applicants will be examined in the subjects *which they teach* only. The papers will be graded by the county superintendent, who will use the same standard as that used in grading manuscripts for the regular county license.

Applicants for high school licenses will answer the questions in "Scientific Temperance" found in the regular county lists. All teachers must be licensed in this subject before contracting for schools. (See section 4497 b, school law.)

For your convenience and guidance the following is quoted from 143 Ind., page 84: "The facts alleged in this case furnish an apt illustration of the injustice to the public of holding that a transfer, when once made, shall continue until the person transferred shall request to be re-transferred. Such a construction of the statute would place it in the power of the person transferred to continue sending his children to school in the school corpor-

ation to which he has been transferred, when the conditions upon which the transfer was made, had entirely changed, and when he could be much better accommodated with school privileges in the school corporation in which he resides. No such construction should be given the statute concerning transfers, unless such intention is expressed clearly and with unmistakable certainty.

"It is clear, therefore, that when a person is transferred for such purposes, it is only for the next school year, and that such person must request and procure a transfer at the time of making the enumeration each year, so long as he wishes the same to continue."

From the above, it is very clear that the transfer to be legal must be made each year.

Very truly,

D. M. GRETING.

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## MISCELLANY.

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SALT LAKE is planning to capture the N. E. A. for 1898.

KIRKLIN graduated four from its high school this year. J. W. Lydy is principal.

THE RICHMOND HIGH SCHOOL has started a paper called the *Argus*. The first number looks well and reads well.

THE AMERICAN INSTITUTE OF INSTRUCTION will meet at Montreal, July 9-12. A. E. Winship, of Boston, is president.

THE graduating class of the Lima High School numbered *fifteen*. This is large for a place of this size. H. S. Gilhams is principal.

FRANKLIN COLLEGE will conduct a summer school, beginning July 15. For full information address Prof. W. B. Johnson, Franklin.

THE NATIONAL MUSIC ASSOCIATION will hold its annual session in New York City, June 24-28. A large and enthusiastic meeting is anticipated.

THORNTOWN sends out this year fourteen graduates from its high school which is doing well. A. E. Malsbary is superintendent and Annette E. Ferris is principal.

MESSRS. R. H. HARNEY AND CHARLES A. PETERSON will conduct an eight weeks' normal at Lebanon and have the promise of a large attendance. They are both capable men and deserve success.

THE TRI-STATE NORMAL at Angola will open a new term, May 11. This school is doing superior work and deserves liberal patronage. Write to the president, L. M. Sniff, for catalogue and full information.

PURDUE UNIVERSITY has just issued an annual catalogue, with announcements for 1897-8. It sets out clearly the work of all the departments. This school is certainly doing work of the highest grade and deserves liberal patronage. For catalogue or other information, address the president, Jas. H. Smart, Lafayette.

THE SPENCER COUNTY SUMMER NORMAL will open at Rockport, May 31. F. S. Morgenthaler and O. P. Foreman are the principals and they will be assisted by County Superintendent Nourse and A. C. Huff.

FRANKLIN COLLEGE, in its last catalogue, shows an enrollment last year of 161 in its college department and a total enrollment of 265. Considering all things this is a good showing. If you wish to know anything about the college, write to the president, Dr. W. T. Stott.

DELPHI, in connection with its high school work, has a Commercial Department in which is taught book-keeping, typewriting and shorthand. Superintendent Almond is discussing the propriety of teaching shorthand to all children at the beginning of the high school course, or earlier.

KOKOMO is reasonably happy since it is assured of the Northern Teacher's Association for next year. By the time of the meeting it will have a fine new high school building and will be in shape to show good schools and entertain its visitors in royal style. H. G. Woody will continue at the helm.

LAST month we stated that Superintendent Geeting was the first superintendent that had ever visited *all* the counties in the State in a single term of office. Geo. W. Hoss while superintendent visited during his first term all the counties except one, and that one would have been visited save for high waters.

WASHINGTON recently met with a serious loss. Its principal school building was burned and the loss above insurance was about \$40,000. The fire occurred while school was in session, but the children were marched out in order, though many of them lost their wraps. W. F. Axtell is superintendent.

ILLINOIS UNIVERSITY has met with a serious loss that may prove a calamity. Its treasurer, Mr. Spalding, was the president of the Globe Savings Bank of Chicago, which recently failed. It seems that Mr. Spalding has used and hypothecated the college funds and securities in improper and illegal ways. The first announcement was that the University would lose nearly \$1,000,000, but later reports gave assurances that the loss will be much less, and possibly most of the securities can be recovered.

MADISON.—“One hundred and twenty invitations were issued to the mothers of the children attending Central school requesting their presence at the Central school building from two to four o'clock. Topics for discussion were enclosed and each mother was requested to have something to say. The object of this social meeting was to bring mothers and teachers closer together, that they may work in unison for the welfare of the child. About one hundred mothers were present and participated in the discussion of the following topics: I—‘The Chief aim of our School,’ led by Miss Addie Almond. II—‘Reading for Children,’ led by Miss Lide White. III—‘The Relation of the School and Home,’ led by Miss Dietz.”

COMPLIMENTARY.—A correspondent of the *Popular Educator* says: “Surely Indianapolis was an ideal selection for the meeting of the Department of Superintendence. From the first glow of its firesides to the last

warm hand grasp, there was an unbroken welcome, courtesy, attention, consideration being shown to every guest. The schools were open to all visitors and many availed themselves of the privilege, returning with the uniform verdict that these schools are among the finest in the country. With the remembrance of an exceptionally capable president, an unhackneyed program and the perfect weather without flake of snow or ripple of rain, the meeting of 1897 must go down to history as an almost unqualified success."

IT WILL pay you to read the new advertisements this month.

A SUMMER NORMAL will be conducted by the Elkhart Institute, beginning June 8. J. S. Hartzel is secretary.

THE STATE NORMAL has enrolled 1,335 in its spring term. It has restored the old standard of requiring a two years' license in order to gain admission to this term.

Do NOT forget the Child-Study Congress to be held at Bloomington, May 5, 6, 7. Some of the "big guns" of the country will be there. A rate of a fare and a third for the round trip has been secured.

SUMMER SCHOOL will open at Washington, May 24, and continue five weeks. The instructors will be County Superintendent W. A. Wallace, W. F. Axtell, Hamlet Allen, C. O. Mallott, J. M. Vance. A large range of studies will be provided.

PACIFIC COAST EXCURSION in connection with the Christian Endeavor rates, conducted by Supt. Chas. F. Patterson, Edinburg. The party will leave Indianapolis, Tuesday, June 29, for St. Louis and Kansas City, thence to Colorado Springs where a stop of two days will be made, giving time to climb Pike's Peak, visit Cheyenne Falls, Garden of the Gods, Glen Eyre and Cripple Creek mines, etc. The next stop will be Glenwood Springs and Salt Lake City, where they will spend Sunday attending Mormon Tabernacle. Thence to Ogden and San Francisco, where ample time will be given to attend the C. E. Convention and take any of the numerous side trips which have been arranged into southern California, down by water and return by rail. Leaving San Francisco, the party will go to Portland. Parties have option of going by rail or water. Thence to Tacoma and Seattle. At this place the party has an all-day free excursion on Puget Sound. Thence to Spokane, Helena and Livingston where party enters the Yellowstone Park spending five days. Thence back to Livingston and St. Paul and Chicago. Trip will consume about thirty days. Any one interested may apply to Superintendent Patterson, of Edinburg, Indiana. Mr. Patterson is always a genial gentleman and knows how to conduct an excursion party and make everybody happy.

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#### SOUTHERN TEACHERS' ASSOCIATION.

The Southern Indiana Teachers' Association held its twentieth annual session at Franklin, beginning April 9. (The printed programs announced this as the *twenty-first* meeting, but R. A. Ogg and other charter members insist that it is the *twentieth* meeting.)

A large number of teachers spent Thursday visiting the schools and the comments were uniformly favorable. The meetings were all held in the opera house which furnished ample accommodations.

The first meeting was opened by music and prayer. Prof. C. H. Hall, of Franklin College, made the welcoming address, which was excellent and well received. The retiring president, A. E. Humke, made an appropriate response and introduced the new president, W. H. Senour, superintendent of Franklin county. The inaugural was thoughtful and suggestive, and was well received. At the close of the address, the Franklin teachers gave a reception in the beautiful K. of P. Hall and parlors. The Association went in a body and the occasion was one long to be remembered.

FRIDAY MORNING.—After the opening exercises which consisted in part of some excellent music, "School Hygiene" was discussed by Dr. Jno. A. Bergstrom, of Indiana University. The Dr. made a strong plea for the children, pointing out many ways in which the health of children is injured if not permanently broken down. He urged that the sanitary conditions of the school rooms be carefully looked after.

Dr. Bergstrom made a second address on "Child Study," which was listened to with interest. He made many suggestions as to the study and treatment of children. In the discussion, Noble Harter, of Brookville, gave some of the results of his child-study work. Mr. Harter makes his study scientific and is reaching some interesting results.

W. A. Bell suggested that while there is a great deal of good growing out of this child-study movement, the subject is not a new one and that much that is good is not new and that much that is new is not practical. He was unable to see any practical use to be made of many of the curious facts published about children under the head of child study.

"The beautiful as a Basis for Literary Study" was the subject of an address by Prof. Arnold Tompkins. The address was philosophic and yet clear; it was profound and yet lively, it was both instructive and amusing. The address was enthusiastically received and heartily endorsed. In the afternoon, Prof. Tompkins made another address, "The Religion of Education." He showed how religion is a *necessary* part of all instruction. He insisted that religion, properly defined, must be a part of all instruction. He made a radical distinction between sectarianism and religion. Mr. Tompkins was once superintendent of the Franklin schools and was greeted by many of his old friends.

FRIDAY EVENING.—Dr. Andrew S. Draper, president of the University of Illinois, gave the annual address, his subject being "The Pilgrim and His Share in our National Life." The address was well received but did not create as much enthusiasm as the Doctor usually arouses when he treats an educational topic. The lecture was historic and very instructive.

SATURDAY MORNING was given largely to Prof. Wilbur S. Jackman, the head of the natural science department of the Chicago Normal School. His first talk was on the "Relation of Nature Study to the Child's Consciousness," and the second was on "Method of Teaching Nature Study Illustrated by Pupils' Work in Painting." Professor Jackman ranks high in his chosen field and gave to his hearers many valuable facts and suggestions.

It was unfortunate that many teachers had to leave before hearing his second lecture, which was really the application of the first.

Terre Haute was selected as the place at which to hold the meeting next year. Evansville, Madison and Seymour all wanted the meeting but Terre Haute was the winner.

The following officers were elected : For president, P. P. Stultz, Jeffersonville ; first vice-president, Kittie Palmer, Franklin ; second vice-president, E. G. Bauman, Mt. Vernon ; secretary, Jane Deming, Shelbyville ; treasurer, W. D. Kerlin, Martinsville ; executive committee, W. H. Wiley, Terre Haute, chairman ; W. F. Axtell, Washington ; C. M. McDaniels, Madison ; Frances Benedict, Worthington ; Leva Foster, North Vernon.

A hearty vote of thanks was tendered to Superintendent Featheringill and his loyal corps of teachers and also to the citizens for their cordial reception and entertainment.

On Friday P. M., the faculty and students of Franklin College held a reception and many of the teachers embraced the opportunity to look through and over the college building and campus. All expressed themselves well pleased with the visit.

The following named cities were represented as indicated : Washington employs thirty teachers and had present twenty-five ; New Albany brought seventy out of seventy-five ; Greencastle, seventeen out of twenty-one ; Seymour, twenty-seven out of twenty-seven ; Columbus, thirty-seven out of thirty-seven ; Greensburg, twenty-three out of twenty-three ; Shelbyville, thirty-six out of thirty-six ; Martinsville, thirty out of thirty. Possibly other cities had as good representation, but the fact was not recorded.

The weather most of the time was exceedingly unpleasant and doubtless kept some teachers away, but the total enrollment reached 625 and every one seemed to enjoy the meeting to the full.

W. H. Senour was president and Jane Deming secretary.

THE MUSIC SECTION held a profitable meeting. The officers for the coming year are J. M. Black, Washington, president ; Miss Hammond, Greencastle, secretary ; Mr. Alley, of Shelbyville, and Miss Loudon, of Jeffersonville, executive committee.

#### THE NORTHERN INDIANA TEACHERS' ASSOCIATION.

The Northern Teachers' Association met at Elkhart, April 1, 2, 3. Hundreds of teachers spent Thursday in the Elkhart schools and all reports are favorable to the schools, notwithstanding the fact that under such circumstances neither pupils nor teachers can do normal work.

When the president called the meeting together in the evening, eleven hundred fifty-four names had been recorded and fees paid. After music and the invocation, an address of welcome was made by Mayor Sykes on behalf of the city, another was made by Rev. F. E. Knopf, secretary of the School Board, on behalf of the teachers and school authorities. The response was made by Supt. Jas. H. Henry, Warsaw. The retiring president, Calvin Moon, of South Bend, made a short address and introduced the president-

elect, Supt. W. R. Snyder, Muncie. President Snyder in his inaugural made a strong defense of the Indiana school system and he emphasized the importance of the amendments provided for in the general school bill which had failed to pass the legislature. His sentiments were in accord with most teachers and he was frequently cheered.

Friday morning was devoted to the subject of "Child Study," and the two speakers were Dr. W. L. Bryan, of Indiana University, and Dr. C. C. Van Liew, of Illinois State Normal School. Dr. Bryan who always does well whatever he undertakes gave one of his best efforts. The Doctor has been making child study a specialty for several years and his addresses on the subject are always helpful.

Dr. Van Liew stands as high as any man west of the Alleghany mountains on this subject and he knows it in all its details. He is not a magnetic speaker but being full of his subject, is suggestive and helpful. The subject of child study received an impetus that will certainly result in good.

Friday evening, Dr. Chas. De Garmo, well known to Indiana teachers through his book and his writings, gave his lecture on "The Sociological Aspect of Public Education." It was listened to by an immense audience. Hundreds of people were not able to get into the opera house and an overflow meeting was held in a church which was addressed by Dr. Arnold Tompkins.

After the address, a grand reception was given in the high school building by the Elkhart teachers. Seats had been removed from some of the rooms and the immense crowd was handled with ease. Hats and coats were checked and all were served with refreshments. Everything was managed with consummate skill and everybody went home delighted.

Saturday morning was given to Miss Matilda Coffin, of Detroit, Mich., and to Arnold Tompkins, of the University of Illinois. Miss Coffin discussed the strong and weak points in school economy. She is an earnest and eloquent speaker and made an excellent impression on her audience. Her talks before one or two of the section meetings were equally well received.

Arnold Tompkins took for his subject "The Beautiful as a Factor in Education." No address from beginning to end of the Association was better received than was this. Mr. Tompkins is always assured of a sympathetic and friendly audience in Indiana.

The enrollment reached fifteen hundred. Near the close of the session, a handsome bouquet was offered to the person who should be the *fifteen hundredth* to enroll. Miss Harrison, of Columbia City, happened to be the lucky person and secured the prize. The officers-elect are: President, W. R. S. Stratford, Peru; vice-president, F. A. Cooper, Crown Point; secretary, Miss Eva Lewis, Huntington; railroad secretary, F. L. Jones, Tipton; executive committee, W. D. Weaver, chairman, Marion; W. E. Browne, Newcastle; Jesse H. Brown, Indianapolis; B. F. Moore, Frankfort; Frank Heighway, Crown Point; Frank M. Beard, Hartford City; G. M. Nabor, Columbia City; B. J. Bogue, Mishawaka; M. H. Harrison, Wabash.

The music furnished the Association was most excellent. The Association adjourned feeling that it had beaten the record.

Mary Welch, of Mishawaka, was secretary.



## HIGH SCHOOL SECTION.

The High School Section was held at the Baptist church. A. V. Crull, of Huntington, presided until train time, when G. M. Miller, of Peru, took his place. Miss Van Nuys of Elkhart, served as secretary. The program included a paper by Arnold-Tompkins on "What Should a Course of Four Years do for the High School Pupil?" with a discussion by Mrs. Emma Mont McCrae, of Purdue; and a paper by Dr. Joseph Swain, of the State University, on "What are the Real Needs of the Indiana High Schools?" with a general discussion of each paper. The new officers are: President, Miss Adelaide Baylor, of Wabash; vice-president, E. C. Holland, of Rensselaer; secretary, Miss Beck, of Marion; executive committee, J. Z. A. McCaughan, of Kokomo, Miss Mary Hinsdale, of South Bend, and D. T. Weir, of Muncie.

## COUNTY AND VILLAGE SECTION.

The County and Village Section was held in the Presbyterian church. G. W. Miller, of Kokomo, presided and J. S. Kauffman, of Elkhart, was secretary. "Elementary Science in Country Schools" was the topic of C. H. Drybread, of Anderson; "The Township School," that of H. S. Gilham, of Lima. County Superintendent J. N. Myers, of Wabash, led the discussion of the last paper. State Superintendent Pattengill, of Michigan, spoke on the value of a good education, the necessity of equal facilities and compulsory education. The new officers are: President, F. A. Cooper, of Lake county; secretary, Milo Miller, of Greentown, Howard county; chairman of committee, John W. Lewis, of Somerset, Wabash county.

## PENMANSHIP SECTION.

The Penmanship Section in the high school building was not largely attended, this being the first effort in this direction. Professor Bachtenkircher, of Lafayette, spoke of the necessity of an organization; Miss Cora Ney, of South Bend, on the "Difficulties to Overcome in Supervising Penmanship Pupils," and G. F. Hostetler, of the Tri-State Normal at Angola, on "Movement and How to Secure It." Professor Bachtenkircher was chosen president; Miss Ney, vice-president, and Mr. Holmes, of Muncie, secretary.

## GRADE SECTION.

The Grade Section was presided over by Supt. F. L. Jones, of Tipton. Papers were read by Supt. W. A. Millis, Attica, on "The Language Work in the Fourth and Fifth Grades," emphasizing the composition; and by Mrs. A. E. Dillon, Rochester, on "The Scope of Number Work in the First and Second Grades." Each of these brought out earnest and spirited discussions. Miss Matilda Coffin, of Detroit, addressed the Section on "Geography in the Grades." This was one of the very best discussions of the whole Association. The work of the Section was characterized by earnestness and a tendency to drive at the truth. The attendance was very large. The following are the officers elected; President, Frank L. Jones, Tipton; vice-president, Mary Jefferson, Lafayette; secretary, James F. Scull, Rochester.

JAMES F. HOOD,  
*Secretary.*

## MUSIC SECTION.

The attendance and interest at the meeting of the Music Section was beyond anything dreamed of. Over two hundred teachers were present, many participating in a long program embracing the following questions for discussion: "The Relation of the Supervisor to the Regular Teacher;" "The Practical Side of School Music;" "How Much Should the Teacher Sing;" "How to Prevent Flatting;" "Value of Rote Singing;" "Proper Tone Production;" "Two Part Singing;" "High School Music Knowledge;" "Monotones;" and "Value of Theoretical Work." The paper by Supt. Horace Ellis, of West Lafayette schools, was an admirable presentation of the subject, "The Possibilities of the Music Supervisor." All the papers read were good and will be published in the secretary's report. This Section was organized at Lafayette with two present. Its growth has been marvelous. The program was in charge of Wm. J. Stabler. W. E. M. Browne presided and J. S. Bergen acted as secretary. Officers for next year are: President, Louis D. Eichhorne, Logansport; secretary, Jas. S. Bergen, Lafayette; program committee, Miss Nannie C. Love, Muncie; Miss Mary I. Harrison, Columbia City; W. E. M. Browne, New Castle.

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**PERSONAL.**

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R. N. CHAPPELLE has been elected principal at Patoka for the coming year.

ADDISON L. FULWIDER has been promoted to the department of history in the Lebanon High School.

G. B. COFFMAN has been elected for a fifth year as superintendent of the Mooresville schools. Good.

W. R. J. STRATFORD, superintendent of the Peru schools, is president-elect of the Northern Indiana Teachers' Association.

W. S. ALMOND has been elected for a fifth year as superintendent of the Delphi schools and he will retain his entire corps of teachers.

MRS. JENNIE C. CRAYS is president of the Minneapolis School Board. She is represented as a woman of superior ability and fitness for the place she fills.

ARNOLD TOMPKINS was on the program of both the Northern and Southern Associations and at both places added largely to his hosts of Indiana friends.

MISS BETTIE G. GRIMSLEY, for the last six years, principal of the Lebanon High School will still continue her work to the great satisfaction of her pupils and patrons.

D. C. SEELYE, who is closing his first year as superintendent of the La Porte schools, has been doing some good work. He makes a favorable impression wherever he goes and the JOURNAL predicts that he will make a good Hoosier.

P. P. STULTZ, superintendent of the Jeffersonville schools, was elected president of the Southern Indiana Teachers' Association for next year.

CHARLES A. PETERSON has done his work so well in the department of science and mathematics in the Lebanon High School that he has been retained another year at an advanced salary.

JESSE H. BROWN, for many years superintendent of drawing in the Indianapolis schools, has accepted an agency for Ellsworth's Illustrated Lessons and Lectures on Penmanship, with headquarters at Indianapolis.

MISS EUNICE E. LITTLE, of Dana, Ind., a graduate of the State Normal and the State University, and last year principal of the High School at Waveland, has been elected to the department of English in the Lebanon High School to succeed Miss Marie Dunlap, deceased.

JNO. M. CULVER, who has been for the past two years teacher of history in the Indianapolis High School, has just been elected principal of the South Bend High School at a salary of \$1,500. Mr. Culver is a graduate of Indiana University, a superior teacher and an estimable gentleman.

PROF. E. B. BRYAN, of Butler College, has accepted a place in the faculty of Indiana University. He will give special attention to pedagogy and supervise some model schools to be organized. Prof. Bryan is a graduate of both I. U. and the State Normal, is a popular institute instructor and is thoroughly liked by everybody who knows him.

JUDGE A. S. DRAPER, president of the University of Illinois, made the evening address at the Southern Indiana Association this year. He spoke upon a non-professional subject and thus failed to arouse the enthusiasm usually manifest in the Judge's audiences. Dr. Draper is one of the ablest men in the country and has many warm friends in the Hoosier State.

O. L. LYON, formerly of Greencastle, but for the last year principal of the normal school at Steeleville, Mo., has been elected to the chair of language and literature in the normal school at Springfield, Mo., at a salary of \$2,000. Professor Lyon is a graduate of De Pauw University and also a Ph. D of Boston University. What state sends out more successful, high-priced educators than does Indiana?

DAVID K. GOSS has been elected superintendent of the Indianapolis schools for a fourth year. The vote was not unanimous but it answered the purpose. Mr. Goss is a person of decided opinions and always has the courage of his convictions and is therefore a person who makes warm friends and warm enemies. He is thoroughly honest and makes appointments without regard to the consequences to himself. He does not know how to conciliate and the word "policy" is not in his dictionary.

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TEACHERS OF INDIANA, do you wish to join a European party which sails July 1st, 1897? Are you willing to do a little work which will help toward the payment of your expenses? Write immediately.

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SCHOOL BOARDS contemplating changes can learn the address of the best Western and Eastern teachers, willing to change places, by addressing Orville Brewer, manager of the Teachers' Co-operative Association, 101 Auditorium Bldg., Chicago. We can assure all who write of confidence and honorable treatment. 2-tf.

SCHOOL TEACHERS.—Please send me your address and I will send you a copy of my new "National Memorial Hymn," the words and music of which are artistically printed on the American Flag as a background. Have your school pay tribute to the old veterans "whose ranks are thinning fast." The song is a lesson in patriotism and can be sung at a glance.

J. EDMUND ESTES, Fall River, Mass.

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**SUMMER WORK AT BAY VIEW, MICHIGAN.**

Although the hundreds of Michigan, Illinois, Iowa, Indiana, Kentucky, Ohio and New York families begin early to occupy their Bay View summer homes, yet the season is never felt to be really open until the summer meeting begins. This year the Summer University opens immediately after the National Educational Association, or on July 13, the Assembly a week later, both running parallel to the close, on August 17. This arrangement will make it convenient for teachers going to the National Association to reach Bay View by the delightful lake route, and at this great summer watering place and summer educational centre receive the physical stimulus of that cool, invigorating, northern climate and the mental professional help from gifted instructors who are themselves successfully doing what they attempt to teach others to do.

Miss M. Louise Jones, who is now regarded as one of the foremost educators in the land, has recently accepted the principalship of the Summer University. At the Kansas State Normal School, where she fills the chair of English, so many are drawn by her work that five hundred teachers often crowd her classes.

Many important changes have been made which are sure to give the already well established and approved work at Bay View still higher rank. The Conservatory of Music has been reorganized, with widely known instructors. Mr. Wilson G. Smith, of Cleveland, whose compositions are among the repertoire of all musical people, becomes director and takes the Piano department; Otto Engwerson, a teacher of prominence and excellence, of Columbus, Ohio, Voice; and Max Bendix, of Chicago, and of national fame, the Violin.

An important change in the college will be inaugurated this year by planning many courses to meet the special needs of the public school teachers. Child study will receive much attention. Among the instructors and lecturers will be, Dr. Arnold Tompkins, from the University of Illinois; President Walter L. Hervey, of the New York college for teachers in courses in pedagogy and psychology; Miss Jones, at the head of the department of English and Literature; Supt. F. R. Hathaway, Flint, Mich. schools, Mathematics; Prof. F. E. Millis, Lawrence University, Wisconsin, Physics and Chemistry; Prof. C. E. Barr, Albion College, Mich., Botany; Prof. Carl Leutwein, Ann Arbor, German; Supt. George Waite, Oberlin, Ohio schools, Latin; Miss Ada Van Stone Harris, Michigan State Normal, Primary and Grammar grade work; Mrs. Lucretia Willard Treat, Grand Rapids Kindergarten Association, Kindergarten; Miss Anna Murray, Chicago schools, Sloyd; Miss Ida E. Boyd, supervisor of drawing, Brooklyn, N. Y. schools, Drawing; Miss Louise Miller, Detroit schools, Elementary Science; and Mrs. Emma A. Thomas, Detroit schools, School Music.

A change this year in the School of Oratory, brings to the department Prof. A. H. Merrill, from Vanderbilt University, Nashville, Tenn., as director and head instructor. Like positions in the Art School are filled by Prof. J. H. Vanderpool, from the Chicago Art Institute, with Mrs. F. N. Bone in charge of china painting classes. With such instructors these schools are sure to take high rank.

Dr. F. K. Sanders, from the Woolsey professorship, Yale University, continues as dean of the Bible School, where his marked ability has year after year drawn large classes. The faculty list for 1897 is completed with Miss L. E. Phoenix, from the Oswego, N. Y., State Normal, who continues at the head of the School of Physical Culture, which has become one of the largest of the university schools.

The Bay View Reading Circle reports a large forward movement and now enrolls over 7,000 students. Special programs and many interesting occasions are being arranged for the members. It sends out its first graduating class this year.

A characteristic, confined to Bay View and only one or two other Assemblies is to each year by courses of lectures, stereopticon lectures, readings and conferences, specialize one leading subject. This year the timely subject will be Germany, when its history, literature, industrial life, art, etc. will be studied. Among the special lecturers will be Dr. M. D. Learned, University of Pennsylvania; Prof. R. W. Moore, Colgate University; Miss Emma Louise Parry, Cincinnati Art School, and others. Besides there will be several popular associate courses of delightful character, so that everyone will find much of special interest and instructive value. These courses will be upon music, literature, education, the Bible and general themes. This year to an unusual extent at Bay View much will be made of present day interests. Lecturers who will speak from extended observation will give courses upon Russia, Turkey, Greece, Cuba and Spain, and the stereopticon will charmingly popularize several courses.

On Farmer's Day, good roads and rural free delivery will be among the themes discussed, and to the inter-collegiate contest, Olivet College, Northwestern, Purdue and Ohio Universities will send contestants.

Among the old favorite lecturers who are to revisit Bay View will be Dr. A. J. F. Behrends, of New York; Col. Geo. W. Bain, of Kentucky; Prof. Charles Sprague Smith, Columbia College; and Mrs. Margaret E. Sangster, New York.

Every day one entertainment of a high order lightens the more earnest work of the day, and there will be concerts on almost every alternate day by such talent as the Temple Quartette, Park Sisters, Fisk Jubilee Singers, Mrs. Genevieve Clark Wilson and Harrold Jarvis, soloists, Prof. C. C. Case and the great chorus of 300 voices.

The June *Bay View Magazine* always gives full information about the Bay View season and is usually beautifully illustrated. It is expected out about May 15 and will be sent on application to J. M. Hall, Flint, Michigan.

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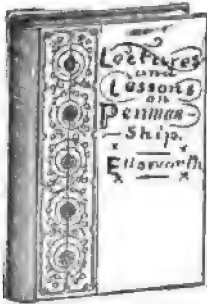
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# INDIANA " SCHOOL • JOURNAL

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## WHY THE GENERAL EDUCATIONAL BILL DID NOT BECOME A LAW.

GEO. S. BURROUGHS, PRESIDENT WABASH COLLEGE.

The friends of Indiana education have been much interested in reading the statement of the Superintendent of Public Instruction, appearing in identical form in the *INDIANA SCHOOL JOURNAL* of April and the *Inland Educator* of the same month, in which he recites certain reasons why the passage of the general educational bill would, in his judgment, have been desirable. Personally, I am happy to find myself in agreement, barring some minor exceptions, with all that is thus said. It is interesting, therefore, to seek an answer to the question, "Why did the educational bill not pass?" It will surely be profitable for all the friends of our public schools and institutions of higher education to know the facts in the case.

First, an important distinction must be made between the ends enumerated as desirable by Superintendent Geeting, and the method employed in bringing these ends forward for legislative action, and also the way in which these were presented in the bill. The distinction is more necessary because the impression prevails in some quarters that the bill was endorsed by the State Teachers' Association, and, therefore, represented the collective judgment and desire of the teachers of the State. This is a mistake. Let us recall the history of the bill as related to the Association. Those present at the several sessions of the

Association to be referred to, will distinctly recall the following facts. On December 27, 1895, Supt. D. K. Goss, of the State Board of Education, presented a paper on "The Need and the Way of Reforming Legislation for Indiana Schools." The paper is remembered for its happy hits at trustees and county superintendents, which some, not in these offices, highly relished. Comparison between this address and the so-called "Geeting" Bill will clearly discover here the bill's incipency and fountain source. The next morning, the attendance being small, as the larger number of teachers had already returned home, a resolution was adopted, providing for the appointment of a committee to draw up a proposed codification of the school laws of the State and to report to the next annual meeting of the Association. Mr. Goss was prominent in the matter. It was proposed to ask the legislature to appoint this committee. Mr. Goss, however, thought it better to have the work done by appointees of the Association through its president. He urged that codification of the school laws was a matter to which there could be no opposition. It had simply been neglected in the past. The work would take some months. He suggested that two good lawyers among the hold-over senators be appointed as part of the committee, so as to insure interest on the part of the legislature. The other members should be educators. Naturally enough when the appointment was made, Mr. Goss with Superintendent Geeting, two members of the State Board and representatives of two State institutions, were these educators. The other members were Senators LaFollette, McCord and Ellison. At the next annual meeting of the Association, this committee reported through its chairman, Superintendent Geeting. The report was made on the last day of the session, December 31, 1896. No codification of school laws was presented; no bill was presented. The committee, now termed a legislative committee, appointed to consider desirable reforms in school laws, epitomized six items regarding which "The General Assembly should be petitioned to enact legislation," viz: 1, minimum school term of district schools, six months; 2, educational qualifications for county superintendent, a four year term, the office salaried; 3, educational qualifications for city and town superintendents, term four years; 4, all teachers' licenses to be State licenses, rules governing examinations to be under the management of the State Board of Education; 5, the



State Board to be enlarged by two county superintendents appointed by the governor; 6, enactment of a district library system. Thus did the "Geeting" Bill come before the Teachers' Association. Comparison between the bill and these items of suggested reform, for which, with possibly slight modification, doubtless every non-State educator would have voted, is not difficult to make. Comment is unnecessary. Moreover, this report was not presented at the later hour indicated on the docket for reports, but early, when few were present. The president suggested delay, but Mr. Geeting preferred action. A motion was made to endorse. A number voted aye, several voted no. It was decided that the ayes were in the majority, and forthwith the "Geeting" Bill is the will of the teachers of the State. It is pertinent to ask where was the general education bill on December 31, 1896, that bill which in its essential characteristics was a further concentration of the educational interests of the State in "a trust" controlled by the State institutions, and objected to for that reason by the non-State college men. Why was it not presented to the Association? Mr. Goss said it would take some months to prepare it. Thirteen days later, January 12, 1897, it was before the senate and referred to its committee on education. Why could not the press obtain access to it even so late as December 31? The press, so says a leading Indianapolis paper, was anxious to print for the information of the public, copies of the bill before the session of the Assembly, but, unfortunately, the advance mimeograph copies, for which Superintendent Geeting later presented a bill to the deputy auditor, were, we are informed, for the convenience of the members of the Board of Education. This is a partial history of that public school teachers' bill, to which when at length known, trustees objected, superintendents objected, teachers objected—indeed the assembled teachers of whole counties, teachers whose institutes were visited by agents of the State Board to explain the bill and show how it was needed in other counties. The educational bill failed because of its peculiar relation to the State Teachers' Association, an association which was formed "for harmony and concert of action" and "as a means of promoting the interests of schools (all schools alike) in Indiana."

Again, the educational bill failed to pass because of the spirit in which honest critics of its provisions were met. It is not

pleasant to have one's correct understanding of plain provisions disparaged as ignorance, nor is it agreeable to have low and partisan motives attributed to one when conscious that he desires simply justice and the advancement of education. It is not pleasant to find one's candid opposition systematically put in a false light, nor agreeable to realize that you are so obtuse that you can not with plainest written speech enable a friend on the other side to discover that you mean anything other than what he wishes you to seem to the public to mean. It is not pleasant to be told that your friends and yourself will suffer if you express your opinions, exercising, as a representative of the press, the right of free speech. It is not pleasant to be told that you are destroying your educational or political future, as the case may be, or to see, through the eyes of another, who kindly tells you of his vision, that your institution will soon be without students because you are not quite willing to concede everything. Although these things may be necessary to one's chastisement and profit, one can not honestly say that he enjoys them. A bill supported in such a manner does not, as one reflects upon the situation, grow in its inherent loveliness. That honest critics of the bill were so met, was so patent that it were superfluous to speak further. A single instance suffices. The defeat of the library bill was kindly attributed, even through the use of the public press, to "the spite work of the non-State college men," though this bill was never once spoken of by any of them publicly or privately.

Third, the educational bill failed because of the way in which the spirit of generous compromise was treated. It is a matter of record how far the non-State men went; it is a matter of fact how far the friends of the other side advanced to meet them. I need only refer to the compromise agreement, signed by the non-State presidents February 22d, and given to the press February 23d. It was in duplicate and read as follows: "We, the undersigned, representatives of the State (or non-State) colleges and friends of the common schools agree and ask that the question of teachers' license based on diplomas from the State Normal School be eliminated from the Geeting Bill, and that the question shall not become involved in the bill at any stage. We further agree and ask that the bill be so amended as to provide for the reorganization of the State Board of Education, so that the said board shall

be composed of nine members, five ex-officers, as follows, to-wit : The Governor, the State Superintendent of Public Instruction, the three superintendents of the public schools of Indianapolis, Ft. Wayne, and Evansville, and four persons to be appointed by the Governor, without the specification of any qualifications except that of fitness and that to be left to the Governor. With these conditions observed, we give our consent and co-operation to the passage of the Geeting Bill as to its main features."

The non-State men did not draw up the paper, but it was presented to them as representing, as they were credibly informed, the desires of the State representatives. It conceded to the non-State men only the severing of the official relation between the State institutions and the State Board, permitting the appointment by the Governor of the presidents of these as members of the board, should he see fit. On this basis, the non-State men were to give their consent and co-operation to the bill's passage. It was granted that the House committee would agree to the compromise situation and that the bill would certainly pass. The non-State men signed ; the State men did not. Why not? They would yield nothing. It is not pertinent, therefore, to say, as is done in the *Inland Educator* of April, that "a mere reading of the two measures proposed in the Senate and House will show at once why those who were in favor of the Senate bill used their influence to defeat the measure of the House." The facts put it thus : It was preferred not to have educational advance, not to further reform, not to unify the educational legislation of the State, not to make the State Board more efficient (putting it in any way the friends of the original bill may desire) at the cost of giving up the hold which the State institutions already have upon the public school system of the State because of the peculiar official relation to the State Board. In plain phrase, it was demonstrated that our school system at present exists not for the child or the State, but for the State institutions.

Fourth, the educational bill failed because, unwilling to yield anything in compromise to honest objectors whose cause is granted by press, people, teachers and legislators to be a just one, the authors of the bill sought its destruction lest fair discussion and debate should take from the State institutions the unjust power which the authors of the bill, to say the least, "blundered," as it has recently been expressively put by a leading journal, into

strengthening. It is a well known fact that the Secretary of the Superintendent of Public Instruction and the Superintendent of the Indianapolis schools, with their agents, labored most earnestly, in the interests of the State institutions, with members of the House to induce them to strike out the enacting clause. It is well known that every parliamentary procedure available was used to tie the hands of the educational committee of the House, and to strangle the bill without discussion. The bill had been "emasculated;" it was "an orange out of which all the pulp had been taken," to use the language of its authors and promoters, because, though all its desired reforms might become law, there was peril lest a fair and impartial board of education might be permitted by the legislators of the State without the consent of the "State educational trust."

Lastly, the educational bill failed because the State representatives were unwilling or unable to see the rights of institutions of higher education privately endowed. A word may be said about "sectarian," "church" and "denominational schools" which "stand outside the public school system of the State," and "venture to interfere with it," and also about that man of straw "the conflict of the church schools with the State schools." The college which I have the honor to represent is under no denominational control. It was not founded to educate clergymen, and never has given any theological instruction. It is not true that it "has for its purpose the promulgation of peculiar and individual doctrines aside from the purpose of education." While it is glad that many of its graduates, like graduates from the State institutions, are in the ministry, yet twenty-four per cent. of these are in the law and nearly fourteen per cent. are teachers. Very many are in public life. Its purpose is simply to give a high and thoroughly literary and scientific college training in a Christian atmosphere. Its students come under the influence of no denominational tenets. They represent at present thirteen different denominations, and they attend the church of their choice. In the first charter, of 1834, as a Teachers' Seminary and Manual Labor College, it is specified that "no particular religious sect, or particular person shall have preference in their admission to the privileges of this institution." It is also specified that "the Board of Trustees shall make it one of the first, and at present the most prominent object, in their efforts, to promote literature in the in-

stitution with special reference to the qualification of teachers of common schools." Nothing is said as to training for the ministry. In the second charter, of 1851, it is specified that "the board shall also have power to establish a normal school for the purpose of qualifying persons to be teachers of common schools." In 1852 such a normal school was organized. Caleb Mills, after laying down his position of Superintendent of Public Instruction, returned to Wabash and became its principal. This normal and English department continued until 1890. By the first charter, the trustees were "elected by its contributors in annual meeting," and, in the event of their failure to so elect, the board itself was empowered to fill vacancies. By the second charter, the board was made a self-perpetuating body. The present board consists of ten lawyers, five clergymen, four business men, one journalist, one representative of the alumni appearing in each of the four classes. The college has been during its entire history in close touch with the public school system of the State. Of its honored Professor Mills, Professor Boone, formerly of the State University, says, in his *History of Education in Indiana*, "he did more for general education in Indiana than any other one man; no man has contributed more to the dignity and efficiency of Indiana schools, both elementary and superior; he was the father of the system of public instruction; he was in perfect sympathy with progressive educational movements and solicitous for the State's welfare; \* \* \* standing for the most liberal policy toward State founded, State supported and State controlled elementary (common and high) schools." When, according to Professor Boone, the president of the institution at Bloomington was ridiculing the idea of the Normal School, Professor Mills was struggling for its introduction. When the State Teachers' Association was organized, Professor Mills was in the front rank as projector and inspiring spirit. Yet this man was a Christian minister and always and consistently denied the right of the State, certainly under the present constitution, to give financial aid to any one institution that was not equally accorded to others of collegiate rank, however founded. Nor did he see the need, in the conditions of higher learning obtaining in this State, of placing upon the people the burden of college or university training. It will not do in Indiana to declare one to be opposed to the public school system because he ventures to criticise an "educational trust" in

the interest of higher State institutions. It must be borne in mind that the non-sectarian Christian college at Princeton, N. J., is in official title the College of New Jersey, with the Governor ex-officio president of the Board of Trustees, and that it stands as the representative of the State's higher education in that commonwealth. The college with which Caleb Mills was associated, from its birth to his death, knows the ground on which it stands, and will courteously and persistently maintain its right both to work for the advancement of the general interests of education in the State, criticising what is unjust and injurious, at the same time always equally willing to work constructively and co-operatively for the common advance of all educational forces. It anticipates the speedy coming of the day when a reorganized State Board of Education shall inspect its work along with that of other institutions of higher learning of the State and when, as Professor Mills desired, we shall have, here, as is the case elsewhere, "the inclusion of all the superior institutions of whatever origin under one control," and it trusts, that under such inspection, it will not be found behind any State institution either in standards of work or in achievement. The general educational bill failed because it was mechanical, divisive, partial, not vitally and organically constructive; it was not in harmony with the genius of Indiana education, as shown in its history and spirit.

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### \*THE SCOPE OF THE NUMBER WORK IN THE FIRST AND SECOND GRADES.

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ALWILDA EDWARDS DILLON.

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The purpose of this paper is to indicate a radical change of procedure from the old way of looking at arithmetic. It shall be the endeavor of the writer to draw the curtain so closely that the old idea of figure and number teaching can not even peep through on this side of the seeming rational, mind-acting plan of teaching the subject. There has been great reform in education in the last quarter-century. Every branch of teaching has felt the change, but none more so than arithmetic. The opening years of this period found arithmetic to be the "science of figures"—the process being mainly counting, and the learning of "tables"

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\*Read before the Northern Indiana Teachers' Association at Elkhart.

and "rules." During the middle of the quarter-century, and up to the present time, arithmetic has been the science of number, or the *how many*. This stage has proved to be a marked advance over the former, because it led to the study of *things* or objects, and at least trained the pupil to perceive and to visualize numbers of things, at the same time, giving a slight impulse to nature studies.

We feel that the time has now come when arithmetic must stride forward and become, not the science of figures nor the science of number, but the science of quantity or relative magnitudes. This change is a radical one, in that it appeals to broader motives, deeper principles, and higher mental activities, and at the same time leads insensibly into geometry and algebra. It is a change from the mechanism of the subject to the study of definite relations of things as to size or magnitude; a definite relation of quantity; a change that recognizes sense-training as the basis of thought, and definite relations of magnitudes as the only basis of mathematical inferences, in which simple ratios are made the key to the solution of all problems, and thus unify all parts of the work and save much time.

The old "figure method" died a hard death, but the present "Grube method," or "fixed unit" method, or many prevailing methods, sailing under different names, but in reality closely akin to the Grube method, will fight a harder struggle to live, but the psychological reason for their existence, and their already long life, is wondered at by the greater thinkers of to-day. There is no other subject taught that is more dangerous to the pupil in the way of deadening his mind and arresting its development if bad methods are used. While we wish, incidentally at least, to point out the aim or scope of number work for the first and second grades, we can not avoid putting stress on how we think this aim or scope should be brought about. There is an unfolding process in which the pupil's mind is developed, not only by leading him to perceive, but also to form judgments and to reason. The simple elementary ideas out of which mathematical inferences grow must be obtained through observing, comparing and judging of the relations of magnitudes and not by counting.

We believe with Fiske and Spencer that the idea of equality is highly abstract and only to be reached gradually. This gradual advance toward the power of exact comparison is reached in

such a way as to center the attention upon the relational element. The work should constantly tend toward definite thinking. To quarrel with number because it is abstract is to quarrel with arithmetic, and to quarrel with the child because truth must be presented to him in harmony with law is to quarrel with Providence, and we believe that teaching strong which grapples intelligently with these conditions. The subject of arithmetic, and the child who studies it must be accepted as they are. They are centers, out of which reform develops, and around which it gathers, but both are creatures of a despotism that laughs at change and defies reform. To know them is to know the laws which govern them, and to teach them is to recognize the obligations which these laws impose, and to apply them is the daily work of the school room.

Assistant Superintendent Speer, of the Chicago schools, says : "The fundamental thing in the essence of the theory of teaching arithmetic is to induce judgments of relative magnitude, because it is the relation of things that makes them what they are, and in mathematics it is the relation of two equal magnitudes." It is my desire to treat the number work for the first and second years from this standpoint ; as, "A science of magnitude or quantity." In order to teach number we must cause the child to think number. Number learning is necessarily number thinking, and whenever pupils learn number, rather than the bare symbols of number, they are actually doing number thinking. This number thinking often takes place in spite of the methods used, rather than by virtue of them. A method which is not based on an actual thought process can be of no positive value. The first question then, which the teacher of number must ask herself is, what is number thinking? What is the nature of the process called numbering? Under what circumstances do we use number in our thinking?

Drs. Dewey, Harris and McLellan, George P. Brown and others, claim that the prevailing difficulties in teaching arithmetic are to be, in the main, ascribed to a misconception of the nature of number.

Let us look at the number idea, since so much is claimed for it. Number is a process of measurement. It is not a property or quality of the things compared ; nor is it, on the other hand, something applied to the things compared. It does not exist



except in the comparison. It is a mental act. It is the act of relating some undefined whole to a given definite standard, thereby giving definite value, or meaning to that which was at first undefined. For example: If asked the length of the year, I may answer 12 months, or 52 weeks, or 365 days. Here I compare the whole year with a certain time unit, and the number involved is the relation of the entire time, the whole year, to the unit of measurement adopted. In all thinking which involves number, there is this comparison of some whole which is to be measured with some standard or unit of measurement. Number is the relation of this whole to the standard. Three yards of silk is a piece whose length bears a certain definite relation to the standard of length called a yard. This relation is discovered by measuring, mentally or actually, this piece of silk by means of the yard stick. Number, then, is that mental act which recognizes, or constitutes a definite relation of size between two objects. Number does not belong to objects in themselves, neither does it arise until the mind deals with objects in a certain way.

The numerical relations in number are exact relations of size. Such relations are called ratios. The size relations or ratios of solids are all definite and exact. If we take a line one inch long as the unit of measurement and lines two, three and four inches long are measured by it, then the two-inch line equals two one-inch lines, the three-inch line equals three one-inch lines, etc. If the four-inch line is taken as the unit or standard of comparison, then the one-inch line is one-fourth, the two-inch line, one-half, the three-inch line, three-fourths, etc. Similarly any one line may in turn be taken as the standard by which to measure any other line. All number arises in such comparisons. Such a process of comparison or mental measurement is called a "judgment as to relative size." Number is a judgment, and if pupils are to be helped to think number, they must be given an opportunity to make such judgments. The child must be set to comparing actual things placed before him.

Objects may be compared as to relative size, because they occupy space, and when the child sees objects as greater or smaller, he has made comparisons, and has established relations, but not exact or definite relations. These relations he expresses by the indefinite words greater and less; and he sees likenesses and differences in magnitude, just as he does in color, leaves or

fruit. But when he measures the first object by the second and finds how much greater and how much less, etc., he has effected an exact comparison and established definite relations. The child learns to know a line as long in comparison with another, short in comparison with a third ; to call a day warm or cold according to that with which it is compared ; so he should learn to know a magnitude as 2 when seen in relation to a magnitude equal to its  $\frac{1}{2}$ , to see the same magnitude as a 3 or 4 or  $\frac{1}{4}$ , when compared with other magnitudes. To make exact comparisons require analysis and synthesis, just as every act does which results in a judgment. In this comparison, we should not use divided magnitudes, for that would destroy the whole we wish to compare. A child grasps a dollar or a dozen, a 15 or a  $\frac{1}{2}$  readily, if they are brought into his consciousness as wholes. If we wish a pupil to note the relation between the length and width of a table, or between a 15 and a 5, a 1200 and a 300, or a  $\frac{1}{2}$  and a  $\frac{1}{8}$ , in every case, we must begin with the whole. The use of undivided magnitudes induces analysis and synthesis. In it the mind moves from the whole to the parts and back again to the whole, and magnitudes thus presented, leave the way open for those successive acts of analysis and synthesis by which such relations are established.

Let us look at the most popular method of teaching number now in use, and see if it treats number rationally. Let us compare it with what we deem the rational way of dealing with number. The "Grube method" or "fixed unit" method does not treat the subject as a "science of quantity." Dr. Harris says : "The method of teaching arithmetic by a fixed unit system does not lead toward the higher mathematics but away from it. Little training, if any, is furnished in thinking the ratio involved in every number." Now, would it not be well to train the pupil's mind into this ratio idea and give the work that scope that should produce right activities?

This "fixed unit" method makes the object all important, and mind activity incidental and unimportant. Number arises in and through the activity of the mind in dealing with objects, but true ideas of number and numerical operation do not arise in the object, but may be brought about by right use of objects. This method of things, or fixed unit method, treats number as if it were an inherent property of things in themselves, simply waiting

for the mind to separate it from the things. Number, being a mode of measuring value, does not do this. It is not the mere perception of things which gives us the idea, but the employing the things in a constructive way. If, to help this mental process, small cubical blocks are used with which to build a large cube, there is necessarily continual and close observation of the various things in their quantitative aspect; if splints are used with which to enclose a surface, the particular splints must be noted. This observation is likely to be close and more accurate than that in which mere observation is an end in itself. The observation which goes with constructive activity is the desired kind. In the case in which the observation is made the whole thing, distinctions have to be separately noted and separately memorized. There is nothing intrinsic by which to carry the facts noted. That the two blocks here and the two blocks there make four is an external fact to be carried by itself in memory. But when the two sets are so used as to construct a whole of a certain value, the fact is internal; it is part of the mind's way of acting, of seeing a definite whole through its parts. Repetition in one case means simply learning by rote, in the other case, it means a recurrence of activity and the formation of an intelligent habit.

The method of action, the way of combining the means to reach an end, the parts to make the whole is relation, and acting according to this relation is rational, and prepares for the definite recognition of reason for consciously grasping the nature of the operations.

The observation method shows the relation of number to things, but does not make evident why it has this relation; does not bring out its value or measuring use, and leaves the operations performed purely external manipulation of number, or rather of things which may be remembered. That method which develops numerical ideas in connection with the construction of some definite thing, brings out clearly the natural unity, the unit of measurement and the process of measuring. It presents naturally the idea of magnitude from which to set out. The true method is to present a magnitude in such a way as to involve both separation, mentally, into parts and the recomposition of the parts into the whole. The analysis gives possession of the units of measurement, the synthesis gives the absolute value of the magnitude,

the process itself brings out the ratio. We thus see the fallacy of the "Grube method," for it proceeds from the mere observation of objects instead of the constructive use of them, and works with fixed units instead of with a whole quantity which is measured by the application of a unit of measurement. It deals with parts which refer to no whole, with units which do not refer to a magnitude. It is as reasonable as it would be to make a child learn all the various parts of a machine, and carefully conceal from him the purpose of the machine, what it is for, what it does, and thus make the existence of the parts wholly unintelligible. In beginning with the "fixed unit," one object, then going on to two, three, then other fixed units, there is no intrinsic psychological connection among the various operations. We may add, subtract, or find a ratio, but they all remain separate processes.

According to true psychology, we begin with a whole of quantity, which on one side is analyzed into its units of measurement, while on the other side the units are synthesized to constitute the value of the original magnitude. We have parts which refer to a whole, and units which make a sum, and addition and subtraction are counterparts. We actually perform both these operations, whether we consciously note them or not. Similarly, we go through a process of forming ratios in the construction of the whole out of the units. The conscious grasp of the principle of ratio will involve no new operation, but simple reflection upon what we have already done.

The natural beginning of number is a whole needing measurement. The "Grube method," with many other methods in all but name identical with the "Grube method," says that some one thing is the natural beginning from which we proceed to two things, and so on. Two, three, etc., being fixed, it becomes necessary to master each before going to the next. Unless four is exhaustively mastered, five can not be understood, and thus a whole year is spent in mastering numbers to ten. How can it be otherwise than a mechanical drill? Do not begin with one, but do as nature does, begin with quantity, a group of things which may be measured.

In the viewing number as a mode of measurement, an appeal is not made to the memory, but there is a training of attention and judgment, and this training, which forms the habit of definite

analysis and synthesis, forms also the habit of balancing parts against one another in a whole, and the habit of orderly breaking up a whole into definite parts, and, so far as this habit is concerned, the memory will take care of itself. The fixed unit method deadens interest and makes mechanical the mind in not permitting free play to continual new development.

In the "Grube method," the fact  $2 + 2 = 4$  always remains the same. According to the "Grube method," a unity is one thing, and that is the end of it. According to the measuring method, unity may be twelve, the dozen oranges as measured by the particular orange, the day of the hour, the foot as measured by the inch, or it may be 100, as the dollar measured by the cent. Instead of relying upon a minute and exhaustive drill in number from 1 to 5, permitting but very little spontaneity, severing nearly all connection with the child's actual experience, the true method gives free play to any and every interest in a whole which comes up in the child's life. Unity as 12, as a dozen, is likely to be more familiar and interesting to a child than 7. But the "Grube method" must rule out 12 in first year. 25 as a unity of money, the quarter-dollar; 50 as the half-dollar; 100 as the dollar, are continual and lively interests to the child's own activities, and is just as much one as is one eye, or one block, and is arithmetically a very much better type of unit than the one by itself.

Some will say, "But 100 or even 12 is too complex and difficult a number for a child to grasp the first or second year." Yes, if it is treated as an accumulation of individual, separate, fixed units. Very few adults can definitely grasp 100 in that sense. No, it is not too difficult, if 100 is treated as a natural whole of value, needing to be definitely valued by being measured out into sub-units of value. One dollar is one as much as one block or one peg, but is also, which the block and peg as fixed things are not, two 50's, four 25's, ten 10's and so on. During the six months in which the child is kept monotonously drilling upon 1 to 5 in their various combinations, he may become expert in the combinations of higher numbers, as, for example, one 10 to five 10's, one 100 to five 100's, etc. If the action of the child's mind is judiciously aided by the use of objects in the measuring process, which gives rise to number, he knows that four 10's and two 10's are six 10's, four 100's and two 100's are six 100's, etc., just as surely as he knows that four units of measurement of any

kind and two units of the same kind are six units of the same kind. Moreover, this introduction of larger quantities and larger units of measurement saves the child the weariness of monotony. Many a child who has never seen four birds sitting on a tree, and two more birds come to join them, making in all six birds sitting on the tree, has heard of one of his father's cows being sold for \$40, four 10's, and another for \$20, two 10's, making in all six 10's or \$60. When it is urged that these higher numbers are beyond the child's grasp, what is meant? If the meaning is that the child can not picture a hundred, can not visualize it, this is perfectly true, but it is equally true in case of the adult. Yet we all have a conception of a hundred such units and can work with the conception to valid results. So the child, getting from the rational use of concrete objects as symbols of measuring units, the fact that four such units and two such units are six such units, gets a clear enough working conception for any units whatever. We prefer a method that expands the mind, demanding the repetition of activities, and taking advantage of drawing interest in every kind of value. To master 7, 8 and 9, is a slow and tedious process, and so the method is compelled to limit the range of numbers which are to be mastered in a given time. It is easier for the mind to grasp the fact that \$1 is a hundred ones, or fifty twos, or ten tens, or five twenties, long before it has exhausted all possible operations with such numbers as 7 or 11. It might, indeed, be maintained that a return to the old fashioned ways, by which they became experts in mechanical processes of addition, subtraction, etc., would be preferable to this monotonous drill on all that can be done with the numbers "from 1 to 10" and from "10 to 20" in first and second years; for the "Grube method" is just about as mechanical as the old; and, while leaving the child little if any better prepared for the "analysis" of the higher numbers, leaves him also without the expertness in the operations, which is essential to progress in arithmetic. No greater mistake can be made than to begin with a single thing and to proceed by aggregating such independent wholes. It does not promote, but dwarfs the natural action of the mind in the construction of number; it leaves the fundamental, numerical operations meaningless, and fraction a great difficulty. No amount of questioning upon one thing in the vain attempt to develop the idea "one," no amount of drill on two such things or three such things, no amount of

artificial analysis on the numbers from one to five, can make good the defects of a beginning which actually obstructs the primary, mental functions, and all but stifles the number instinct.

Why the method of isolated "units" should be clung to with such tenacity, it is difficult to see. If this method is in harmony with the normal movements of the mind, then all the great psychologists from Aristotle to Harris are wrong as to the fundamental psychic function which transforms the vague into the definite, the order being first the undefined whole, then the analysis and discrimination of parts, and finally the conscious synthesis and back to the defined whole. To obtain a definite idea of a quantity, there seems to be no other way than to conceive it as made up of known parts. This is the number process, the known parts, the units of measure. These parts or units of measure are repeated a known number of times to measure the quantity; that is, number determines the how much of units of measure. In this process it is clear that all the characteristic ideas of the fundamental rules including fractions are freely used.

There are few children who do not at first delight in number. Who has not noticed the little child count his play things, the buttons on his mamma's dress, etc.? Counting is a thing of joy to the child. "The one, two, three, of the little one is the expression of a higher energy struggling for complete utterance. It is a proof of his gradual emergence from a merely sensuous state to that higher stage in which he begins to assert his mastery over the physical world." The natural action of the child's mind in gaining the first ideas of number, is attended with interest, and a rational procedure along this line will only strengthen and quicken this natural interest instead of letting it die out as some methods have a tendency to do. The child's number instinct begins to show itself in its working upon continuous quantity, and every successive step in the entire course of development should harmonize with this initial stage. To get exact ideas of quantity, the mind must follow nature's established law, must measure quantity, must break it into parts and then unify the parts till it recognizes the one as many and the many as one.

There can be no possible numerical abstraction and generalization without a quantity to be measured or compared. We begin therefore with a group, for this is in harmony with nature's method, and promotes normal mind action, gives the instinct for

number something to work upon, and wisely guides to its richest developments, and leads gradually, but with ease and certainty, to true ideas of number. Parting and wholing should begin at the first. Not only do we not begin with a single object and "develop one," but also, even in beginning with a group of objects, we do not begin with the single object to measure the quantity. We separate 12 pegs for example, not into 12 parts, but into 6 parts, 4 parts, then 3 parts, etc. That is, we measure by 6 pegs, by 4 pegs, by 3 pegs, and the resulting numbers for the one measured quantity are two, three, four, six, and each of the measuring parts to which the numbers are applied is a unit, a one. The point to be kept in view is to prevent the error of regarding the unit as a single object, a fixed qualitative unity, instead of a measuring part, a means of measuring a magnitude. The unit itself may be measured because it is a quantity, and so is made up of measuring parts. Beginning with a group of 12 objects requiring measurement we have them counted off into equal parts, noting the relation of the parts to one another and to the whole, then each of these two units, half of the given whole, is counted off into equal parts, and the relation of these minor parts to each other and to the whole which they compose, is noticed, then each of the first units of measurement, halves of the given whole, is counted off into three equal parts, and their relation to one another and to the whole which they make is carefully observed, and so on with similar exercises in parting and wholing. Such constructive exercises help in the growth of the true idea of the unit as a measuring part, which is, or may be, itself measured by other units. But the true idea of the essential property of the unit, its measuring function, can be fully developed only by exercises belonging to the second stage of measurement, in which exact and equal units are used for precise measurement. These measurements of groups of like things, apples, oranges, etc., by groups, which are themselves measured by still smaller groups, must be supplemented by the use of exactly measured quantities, defined by equal units, which in turn are measured by other equal units. In this way the mind grasps clearly and definitely by one act a whole composed of many and defined parts.

This primary activity, working upon quantity in the process measurement, gives rise to numerical relations. This wholing and parting so far as possible, should be a constructive act, and,



if treated so, will lead quickly, and with the least expenditure of energy, to a clear and definite conception of number. The child should be required to exercise this activity, to do as much as possible in the process, and to notice and state what he is really doing.

We use objects in a constructive way, but many objects are unfit to awaken mathematical ideas, because their differences in magnitude are not easily perceived by the senses. Their exact measurement is not easy. Simple magnitudes are best for accurate imaging. That mathematics enters into other sciences is understood, but mathematics can not receive laws from them, for each is special. The attempt to call forth mathematical ideas by phenomena whose exact measurement is beyond the power of the pupil, will never bring mathematical relations definitely into consciousness. Plants and animals are not well adapted to mathematical purposes. It is difficult for the undeveloped mind to view these objects in their mathematical aspect. Their differences in magnitude are not easily appreciated by the senses. Their exact measurement is not easy. They lend themselves to accurate imaging far less readily than simple magnitudes, and do not result in those mental states which would be created were mathematical relations brought conspicuously and impressively into the pupil's experience. Objects whose exact relations can be most readily seen, imaged, and exactly compared, are the things to use. Comte says: "Right lines are easiest of comparison." This seems true since the measurement of all magnitude is reducible to measurement of linear extension, and the comparison of linear units reveals that perfect equality upon which the science of mathematics is built. By comparing right lines we establish ratios, and out of these ratios the ratios of surface and solids are inferred and also the quantitative relations of units of value, force, and, in short of all other magnitudes. Then it seems rational to use lines, surfaces and solids, because they will aid the mind in the mental act of seeing definite relations of quantities which can not be brought before the range of vision, only seen mentally.

I am not in sympathy with the butter-fly delusions of the day, neither do I believe number should be taught incidentally for first year, nor that exercises akin to counting the petals of a flower or the legs of a grass-hopper are mathematical. Superintendent Speer says: "Such work ignores the fundamental idea out of which quantitative reasoning grows, that is the equality of mag-

nitudes," for says Spencer: "The fundamental idea underlying all mathematics is that of equality." Numerical statements are frequently required in the study of natural history, but to repeat these as a drill upon number will scarcely lend charm to these studies, and certainly will not result in mathematical knowledge.

The mind must at last be freed from the concrete. This may be done by noting the same relation between many different magnitudes until the relations are the objects of thought and become fixed. Gradually the child learns magnitude in the only way that they can be known, in relation. Thus the simple ratios of mathematics become real to the child. Giving varying names to the units, as a 12, and a 6, a  $\frac{1}{2}$ , etc., aids in separating accidental from essential relations, and helps to fix relations as the aim, and through many experiences the child becomes able to dissociate the relations from the things and deals with the 2, the 3, the  $\frac{1}{2}$ , etc., as uniform relations upon which far-reaching inferences may be based. Fiske says; "The peculiarity of abstract conception is that the matter of thought is no longer any one object, or any one action, but a trait common to many, and it is, therefore, only when a number of distinct objects or relations possessing some common trait can be represented in consciousness, that there becomes possible that comparison which results in the abstraction of the common trait as the object of thought."

By means of seeing relations, we must infer relations. If the exact relations are perceived the child will have no trouble in imposing many applications. Rightly taught, such inferences as that the weight of D equals 3 times the weight of A, that 3 times as many inch cubes cut from D as from A, that the weight of A equals  $\frac{1}{3}$  the weight of D, and many other applications may be made. Pupils should be trained from the first to make mental and right images of things that they are to compare, and in this way prepare the mind for abstract thought and reason. "We note the likenesses of two magnitudes and have obtained a basis for inference by comparing, and when we see exact likenesses we enter the domain of mathematics." The service of the eye and the hand, of drawing, cutting, making, etc., in aiding to form clear mathematical ideas, should be particularly emphasized for the first three or four months of school, the training of the senses, not as something separate and apart, but as an essential thing for the highest development.

The judgment and memory must be trained through the sense of touch as well as of sight. "To look at things is not enough, to handle them is not enough, to judge them is needful." This should be the stress of work while the child is making indefinite comparisons, that is, making comparison of magnitude in an indefinite way, as smaller, larger, etc.. Then, after this, he should be led to make definite comparisons, and to study relations or ratios. This brings out the fundamental processes including fractions. The proper application of this work will bring into use the more common tables of weights and measures.

As to the teaching of figures: The child will have no use for the symbol for the first part of the year at least, but I do not believe it hurtful for him to know how to write and to read numbers readily to 1,000 by the end of the first year. Whenever the pupil has mastered the idea and associated it with its appropriate oral expression, he is then ready for the symbol. Give it as we would any other sign standing for an idea. The work for the second grade is, in the main, similar to that of the first, dealing with wholes, making comparisons, emphasizing relations or ratios, and the fundamental processes then take on a more decided phase.

The work of the second grade should be closely related to that of the first. It is only more growth, and unfolding toward the final development. The work in the beginning should be so simple that it can be done easily, and constantly grow into perfect quantitative judgments, and reasoning, and when the child makes definite comparisons, there is reason in the very act, so we see a constant and continual growth from the first toward reason and judgment.

In conclusion I will say, that I have tried to show the purpose of mathematical science to be the establishment of definite relations between magnitudes, and that the fundamental operation is comparison, and out of these relations established by comparison grow inferences. and that mathematics does not deal with things as separate and absolute, but deals only with relations. Therefore make definite relations the basis, and the integers and fractions are each seen as ratios. Geometry, arithmetic and algebra merge insensibly into one another.

With definite relations as the center, it becomes clear that if "we would teach mathematics, and not the mere mechanism of the subject, we must look to the development of the representa-

tive and comparative powers." Only thus can we lift arithmetic from a matter of memory, routine, and formula to its rightful place as a means of setting force free and of enlarging the mind.

Rochester, Ind.

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## THE LABORATORY METHOD IN MATHEMATICS.

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SUPERINTENDENT C. L. HOTTEL.

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The present decade is noted for the spirit of unrest which pervades all professions and vocations. There is a universal desire for something better than we possess. This is especially true in the teacher's profession. So far as this desire is controlled by wisdom, it is well. But our zeal in seeking new methods should not lead to their adoption until a thorough investigation has shown them worthy of adoption. Experiments in pedagogy, not preceded by the fullest and most careful investigation possible, are, to say the least, unpardonable in the school room. School life is too brief, and the opportunity for mental development is too sacred, to permit every pedagogue to enter into the business of wholesale and random experimenting.

With the above thought in mind, I wish to discuss briefly some points in what is commonly called the Laboratory Method in mathematics. To the readers of the JOURNAL no statement of this method is needed. Nor is it necessary to say that in this discussion no discourtesy is intended, even to the opinions of some excellent teachers who are using the new method, for the question of its merits is still within the realm of the theoretical. The fact that a few teachers believe they are obtaining better results with it than with the class room method, proves but little as to its merits, for the unusual zeal always displayed in testing a theoretically favorite method, is a large factor in producing and shaping results. Besides, in testing a new method of his own adoption, the teacher is always interested in having it prove successful. He does not like to record a failure in judgment. Moreover, results can not always be correctly and fully known until the crucial test of time has been applied to them. Frequently a pupil's training, or lack of it, can not be fully known until he has passed on into new fields. It should be remembered also that a few teachers can produce good results with methods which would

prove disastrous if used by the profession in general. The master teacher is greater than any method. The high character of the teachers now trying and commending the new method, warrants the belief that before adopting it they examined it as to supposed merits and demerits and decided the former to be in excess of the latter. Their conclusions may be questioned without reflection upon their general standing as teachers.

Would the new method prove to be a success if used by all teachers, or even a majority of them? Does it permit a full discussion of the principles involved in a problem or demonstration? Does it afford opportunity for the "many sided view" of a problem? Does it permit that "trial of strength" which is had when a problem is discussed by the class under the wise direction of the teacher when using the class method? Does it permit an opportunity for the teacher to "lead" pupils to produce the most desirable results? Does it not foster narrowness of view and self-conceit in the pupil by permitting him to content himself with one view, his view, of a problem? Does it not, in a large degree, forbid that "fixing of principles" in the minds of pupils by discussion, which is one of the chief merits of the old method? Does it not antagonize the well-established fact that "mind sharpens itself by contact with mind?" With a class of twenty pupils who have been working under the Laboratory Method three months, probably no two of them working on the same page, and no four of them studying the same subject, how much "leading" and discussion can the teacher do and have in a recitation of forty-five minutes? It will not be generally accepted as true that ten of the pupils can be used as teachers of the other ten. Pupils are *not* teachers. Such a plan may be helpful to those trying to teach, but no teacher has the right to subject half or any number of his pupils to such teaching. It seems to me that there is far more opportunity for the teacher to strengthen the minds of his pupils, to establish principles firmly, and to give a clear and broad conception of those principles and of the problems containing them, under the old method in which a few principles or problems are thoroughly discussed by the class and himself, than under the new, which from its very nature forbids discussion.

Again, young pupils are deficient in will-power. They have not yet learned "to do the right for the right's sake," at least under circumstances which are discouraging. Does not the

laboratory method tend to discourage weak pupils by emphasizing the difference in mental ability between themselves and the "gifted" pupils? I know the counter argument here, but it does not dispose of the fact that this difference made prominent, from whatever cause, does discourage weak pupils. Strong pupils can be interested under the class room method without discouraging the weaker ones. To make more forcible the statement that the new method carries with it the element of discouragement, apply it to geography, botany, physics, chemistry, and to almost any other subject in the high school, and view the result. And, indeed, the same reasons that would apply this method to mathematics, would apply it to most, if not to all, the subjects in the high school curriculum. What, think you, would be the results were it thus applied for a series of years? What would be the result on will-power were this difference in mental ability to become publicly marked in all the studies of the course on general discipline, mental and moral?

Would not such application destroy the graded system? It is a true maxim that a principle which can be applied to one of several things, can be applied to them conjointly with like results. Therefore, if the Laboratory Method can be applied with success to one subject, it can be applied with success to all subjects to which it is equally well adapted. But no large amount of acumen is needed to foresee failure, should it be applied to even a majority of the studies in the course.

Again, does the new method afford the fullest opportunity for discipline, the acquiring of self-control? It is hardly necessary to state that self-control does not come from doing what one likes to do. There is a tendency creeping into our methods of government, to overlook this fact. A pupil's desires should be considered, but our method of dealing with them should lead him to suppress those which are wrong in their nature or tendency, and to strengthen those which will promote his proper development. The fact that the relations between teacher and pupil are pleasant, although this is desirable, and will, in the end, certainly follow a proper method of government, does not necessarily indicate the presence of any real, strengthening discipline. Just here many teachers mistake "a good time" for good discipline. The former is often had in the entire absence of the latter.

Nor has it been clearly shown that the new method develops

and sustains interest. From a psychological standpoint, it would seem to suppress interest, for the chief element in developing this important educative factor is, that the fact or thing studied be seen in all its relations. And will not twenty pupils see more relations than will one studying hermit-like with only a word now and then from the teacher? Is it not quite probable that a few teachers have mistaken either novelty for interest, or the strength of their own personality for method, and have, therefore, formed conclusions on this point which are erroneous?

Portland, Ind.

### JOAQUIN MILLER AT A TEACHERS' INSTITUTE.

MARY V. SINCLAIR.

Unity Auditorium was filled by an expectant audience, on the last afternoon of the week's session of the Teachers' Institute in Olympia, Wash., in August of 1896.

The "Poet of the Sierras" was to lecture. His arrival had been delayed, and Harr Wagner, editor of *The Pacific Journal of Education*, had talked to us of the poet's interesting home in California; of the aged mother who presides there; of the wise cats whose decorous mien entitles them to membership in the household; of the miles of stone fence that have been constructed by the poet's own hands, of the different poems that were written in this retreat, etc., so that when at last Superintendent Henry introduced to us Joaquin Miller, we were, in a measure, prepared for the conflicting ideas which the personal appearance of the "wandering poet" must even inspire in the minds of those who see him for the first time.

A figure, the perfection of muscular development; a carriage easily erect—these bespeak mainly vigor. But the head! The luxuriant beard, the flowing, perfumed locks, are poetic softness. They belong to the age of romance, and are only saved from the charge of effeminacy by the face they adorn—a face unmistakably stamped with the light of good, pure, beautiful thoughts, and at the same time suggestive in some subtle way, of the retirement in which this lover of nature spends so much of his time. It was as though some picture of the old masters did, while we were admiring it, step from the canvas and instruct, plead, admonish. For his talk was given in those forms of address, and was made

up of extracts from his lecture "Lessons Not Found in Books," and from poems appropriate to his themes. One of these, used in his exhortation to *love*—love the children in our care, because our lives shall thereby be enriched, and theirs made more lovable; love our friends and *let them know it*, that we, and the present be happier and therefore better, was the Ring-dove's call to his mate to fly to her love and—

"Be happy to-day my love, my love,  
To-morrow may be too late—"

rendered in exact imitation of the bird's plaintive, and seductively sweet notes.

The speaker made few gestures, one of which was inimitable because apparently so unstudied. It was a gesture of appeal, and began with an accusing finger shaken at us as if saying, "Now you *know* teachers have this fault," and ended with a quick, persuasive little beckon. The best practical thing the poet left with us, was a solemn charge to promote, to teach, to compel *cleanliness*. Cleanliness of body first, then cleanliness of language, that it may naturally follow the mind shall acquire the habit of thinking clear thoughts only.

Joaquin Miller is a delightful and refreshing mixture of the old-time and modern poets. To something of Tennyson's power of writing delicate, subtle, beautiful, *real* poetry, he has added the art of philosophizing in rhyme. And his words will live, and do good with a mighty influence.

The Poet of the Sierras is deservedly popular, but for tender pathos, touching sadness, liquid sweetness, shining truisms, or cunningly-clothed invective, he can not *quite* compare with our own Riley.

Cloverdale, Ind.

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Then let us, one and all, be contented with our lot;  
The June is here this morning, and the sun is shinin' hot.  
Oh! let us fill our hearts up with the glory of the day,  
And banish ev'ry doubt and care and sorrow far away!  
Whatever be our station, with Providence fer guide,  
Such fine circumstances ort to make us satisfied;  
Fer the world is full of roses, and the roses full of dew,  
And the dew is full of heavenly love that drips fer me and you.

—James Whitcomb Riley.



## THE RELATION OF HISTORY TO GEOGRAPHY.

W. T. HARRIS, U. S. COMMISSIONER OF EDUCATION.

*My Dear Mr. Bell:*

In the April number of your JOURNAL Professor Weatherly, of the University of Indiana, in a very able and interesting article on "The Relation of History to Geography" does me the injustice to quote me as contending that history has not been influenced to some extent by geographical conditions. To prove this he quotes from me the statement: "The geographical environment of the American Continent has not materially modified the development of American civilization already on its course of elevation [I said 'evolution'], when the immigrants were leaving their European homes for this country." He quotes again from me to the effect that the proper study of environment with us "has therefore become a sort of inventory of the products of nature which are to serve as raw materials for human ingenuity to transmute into articles of use." He goes on in the next sentence to say, "We are by no means shut up to a choice between two such extreme views."

Inasmuch as Professor Weatherly does not show anywhere in his article that the environment has materially modified the development of American civilization I write to ask him to give examples showing that my statement is incorrect. I did not say sweepingly "not modified," but I said "not *materially* modified." Of course I know that the removal to this country of immigrants forced them into different occupations from those that they had filled in England and Scotland. I know too that the difference in climate between New England and the southern colonies has developed certain differences. In short, differences have occurred in agricultural employments, in fishing and herding, and in some cases in manufactures, but I have not learned that these differences *materially* modified the civilization. I will explain this by saying further that the "American civilization, already on its course of evolution when the immigrants were leaving their European homes for this country, was a civilization based on a protest against the forms of government and forms of religion at home in Europe. This movement was deep enough to be called a civilization. Political and religious movements are deep enough

to characterize a civilization, but agricultural and manufacturing occupations, hunting and fishing, are not deep enough for this purpose. Therefore, while the civilization could not be materially modified by a change of such vocations, yet it could be materially modified by the change of religion or change of political form of government. Now I submit to Professor Weatherly that the trend of the civilization in this country has been constantly in the same direction, for two hundred and fifty years, that the colonists brought with them on their arrival in this country. Climate and soil and environment have not changed European colonists into Indians or Eskimos. The negroes who were brought here as slaves have had their civilization thoroughly changed, but it has been changed into the kind of European civilization which the colonists from Europe brought with them. The people of the United States are now as earnest in behalf of individual liberty and the right to settle individually their choice of religion as their forefathers were who first immigrated to this country.

Now, when I was writing the paragraph which is quoted from me I had no idea that any one would suppose that I denied altogether the influence of geographical environment. I do not hold and never have held any such view. But I hold, and have held, that the geographical environment is much more potent to modify the character of human beings when they are in lower stages of civilization than it is in the case of a higher stage of civilization. The higher the stage the less effect of environment upon man. In the low stages man like plants and animals, is very seriously determined by his environment. The civilized man does much to carry his climate with him wherever he goes, and does not allow nature to determine him, but uses "the instincts of nature in his environment as raw materials," and then unites them into articles of use.

But even in the case of plants and animals, the determining influence of climate requires long periods of time to effect great modifications. Anthropologists will readily admit that a period of two hundred and fifty years is altogether too short to modify very seriously the physiology of man. It is too short also to effect very much change in civilization. A human environment of a different civilization will make much more change than the physical environment. This we have seen in the case of the negro who came into the families of white colonists in the capac-

ity of slave, and in two hundred years the negro lost all of his old recollections and traditions from Africa, and also got rid of the African methods of thinking, and adopted instead thereof the European view of the world as held by the white colonists in whose families he lived.

There is a "black belt," so called in the Gulf States, containing negroes of more recent importation and of less association with white people which consequently has received less modification. But the negroes even of this black belt have adopted the English language, and in general the view of the world taken by white people in their environment.

But I have no quarrel with Professor Weatherly in regard to the contents of his article; on the contrary, I think his suggestions very pertinent.

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### **LEND A HAND.**

*(This department is conducted by Mrs. E. E. Olcott.)*

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*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

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#### **FOR THE GEOGRAPHY CLASS.—CRETE.**

Our civil war closed thirty-two years ago. That seems a long, long time to you who are now studying United States history and geography. The revolution with Washington for its hero, and such books as "The Boys of '76" to make it vivid, seems more interesting and real.

War is only a history story to you but to the children of Crete it is to-day a dreadful reality. Many of them know what it is to have father or brothers march away and fall on the battlefield. Many are praying for the safety of loved ones in prison or fighting for freedom. Many see the foreign war ships in the harbors and have glimpses of soldiers, Russian, Austrian, German, Italian and French, who are besieging their unhappy island home. Many, many are starving to-day because those war vessels have cut off supplies.

The Cretans are fighting heroically for union with Greece which to them means liberty. The island belongs now to Turkey, and the Turks who are Mohammedans oppress the Cretans be-

cause they are Christians. The Cretans are really Greeks, speak the Greek language, belong to the Greek Christian Church, and naturally wish to be under the Greek government. Greece is equally eager for the union, and sent soldiers to help the Cretans.

The Turks would soon have been driven from the island, if the European powers, as the six nations of Russia, Austria, Germany, Italy, France and England are called, had not interfered. Five of them—England refused to join the others—blockaded Crete, and are starving the Cretans into submission to Turkish rule. To us in free America the action of the Powers seems unjust and cowardly. The *Youth's Companion* says: "The contention among the Powers as to which fired most effectively upon the Cretan insurgents, resembles six strong, armed men, quarrelling about which gave the hardest blows to a small defenceless boy."

The Powers claimed that they feared that Turkey would declare war upon Greece, and that might lead to a general European war which would be a dire calamity. Turkey has declared war, anyway. If Greece is victorious, Crete will be free, but if the Powers interfere no one can tell the facts of the island. Crete is only sixty miles south of Greece. It is a long, narrow island, having about one-tenth the area of Indiana. It is very mountainous with fertile valleys and plateaux. It has a fine climate and excellent harbors. The island was old in history when Christ walked with his disciples in Galilee. In Acts xxvii, 7, 8, we learn that the ship that bore the Apostle Paul to Rome was driven by a storm into The Fair Havens, a harbor on the southern coast of Crete.

New Testament times are comparatively modern to Crete. It is the home of the ancient heathen religion. Mythology says that Jupiter was born there; that Daedalus constructed the famous labyrinth in a Cretan cave, that afterward Theseus killed a Minotaur in that labyrinth, and through the help of Ariadne, escaped back to Greece; also that the wild picturesque coast of Crete was the home of the Sirens. Cretan soldiers are said to have fought in the Trojan wars. Crete was so prosperous and populous in that far-away time that Homer called it the "Isle of One Hundred Cities."

The Cretans were never conquered until through quarrels among themselves they were compelled to surrender to the Romans

in 68, B. C. Since then their history has been a long, sad story. They have been given away, sold, or seized by nation after nation. But through it all they have remembered that they are Greeks, and as Greeks they wish to be recognized. Let us hope that their courage and patriotism will be rewarded, and that after nineteen hundred years of bondage, the Cretans may once more be free.

#### THE BIRTH-PLACE OF JUPITER.

Near the Center of Crete is a mountain famous in ancient history, called Mt. Ida. The islanders used to proudly point out a large cave where Jupiter was born, and also show the great rocks upon the mountain side from which an eagle drew ambrosia and nectar—the food and drink of the gods—to nourish the baby Jupiter. He was nursed by water nymphs and rocked in a cradle of gold. Jupiter became the greatest of heathen gods, the king of gods and men. He sat upon a throne of ivory and gold, holding a scepter of cypress which was the emblem of immortality. There were great forests of cypress in Crete in ancient times, but there are only groves there now.

One of the sons of Jupiter, Minos, became the first king of the Cretans, and made wise and just laws that led to their becoming prosperous and powerful.

#### DAEDALUS AND ICARUS.

Daedalus was a Grecian architect and sculptor who lived in Athens. He carved such wonderful statues that they not only looked alive, but would move about and fly away if not chained. But Daedalus was very vain, and becoming jealous of the work of one of his pupils, killed him. Then Daedalus fled to Crete, where King Minos received him kindly. He built for the king the famous labyrinth. The labyrinth was in a cave and was made up of walls and winding passages that crossed and intersected each other so that any one who ventured in could never find his way out. Daedalus himself once almost lost his way in it.

Although King Minos was very kind to Daedalus, he did not wish him to leave the island, and had him watched so closely that Daedalus was really a prisoner. Finally Daedalus made wings for himself and Icarus, his young son. The wings were fastened to their shoulders with wax, and Daedalus warned Icarus, as they escaped from Crete, not to fly too near the sun. Icarus was so

delighted with his wings that he forgot his father's warning. He raced with an eagle, and flew straight toward the sun. Suddenly he felt his wings becoming loose, and down, down he fell into the sea and was drowned. His body was washed up by the tide, and his father sorrowfully buried it on a little island. If you look on a large map you can find, near Crete, that little island, Icaria, which Daedalus named in remembrance of Icarus. Daedalus flew to Sicily where he lived ever after.

#### THESEUS AND ARIADNE.

A son of King Minos was murdered by the Athenians. To avenge his death, the king sent an army and conquered the Athenians and exacted from them a terrible tribute. The labyrinth built by Daedalus had become the lair of a Minotaur, a hideous monster that lived upon human beings. The tribute was that every nine years, seven youths and seven maidens of the noblest Athenian families must be sent to Crete to be placed in the labyrinth and devoured by the Minotaur.

Theseus was the son of the king of Athens and he determined to put an end to the terrible tribute. So he offered to take the place of one of the seven youths. Before reaching Crete, he appealed for aid to Venus, the goddess of love.

When the youths and maidens stood before King Minos, Venus inspired Ariadne, the king's daughter, with such a love for Theseus that she secretly gave him a magic sword with which to attack the Minotaur, and a thread which she charged him to fasten at the entrance of the labyrinth and unwind as he went to meet the monster. Theseus obeyed her and killed the Minotaur after a fierce struggle. Then guided by the thread, he led his companions safely out of the labyrinth, and escaped to the ship, taking the beautiful Ariadne with him. He loved her devotedly, but in a dream he was told that Bacchus, the god of wine, loved her also, and that he must leave her on a lonely island to be wooed by the wine god. Theseus dared not disobey, so with breaking heart, he parted from his lovely sweetheart, and reached Athens in safety.

Ariadne learned to love Bacchus, and he gave her a beautiful crown. When she was dying, he wished to have something to keep her in remembrance, so he took her crown, tossed it toward the sky and lo! it appeared as a group of twinkling stars, known as Ariadne's crown.

## THE SIRENS.

Wild and wierd, with beetling rocks carved into fantastic shapes by the restless waves, the coast of Crete was a fit home for the sirens of old.

The sirens were sea-nymphs, the upper part of their bodies was that of a beautiful maiden, the lower part, that of a sea-bird. They had wings attached to their shoulders. They sang such entrancing songs that no mortal could resist them. If a ship came near the Cretan coast, the sirens sang so bewitchingly that the sailors steered their vessel straight upon the rocks, caring for nothing but to come nearer to that beautiful music. The sirens sang to the ambitious of glory, to the covetous of wealth, to each of his heart's dearest wish. No ship escaped the cruel rocks, no sailor the crested waves.

Ulysses filled the ears of his sailors with wax, and ordered them to tie him to the mast and on no account to release him until they had safely passed the sirens' retreat. When he heard the alluring voices, he plead and threatened, coaxed and commanded, and raved at his sailors to unbind him. They could not hear a word and, frightened at his expression, made all speed to pass the island. Ulysses was afterward thankful that they could not hear his commands.

The Fates had decreed that if ever any one resisted the sirens and voluntarily passed their retreat in safety the sirens must all die.

Orpheus played so beautifully upon the lyre that the birds and beasts followed him lovingly, the brooks paused to listen and the breezes lingered to hear the music. Orpheus choose to sail near the dreaded coast. When the sirens' song reached the ears of the sailors, Orpheus began to play, and he made so much sweeter music that the sailors cared nothing for the sirens and passed safely by. Then the sirens, wild with envy, cast themselves into the sea. They were turned into stones and legend says the stones are still to be seen on the coast of Crete.

Doubtless the starving Cretans wish the sirens were still alive, then the war ships would soon have to sail away or be wrecked, and Crete would be free.

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TEACH with special reference to (a) the dull, (b) the poor—as they often have to leave school years before their mates to begin the struggle of life—(c) the indifferent, (d) the depraved.

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DESK-WORK.—A PLEASANT REVIEW.

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Write upon the blackboard a list of geographical names, about each of which some interesting bit of information has been gleaned during previous lessons from the geography or supplementary books or papers. Assign to each pupil one name upon which to make special preparation. A pleasant way is to assign them alphabetically using the initial of either the Christian or surname. Thus, Crete might go to Cora or Charlie, Japan to some one named Jones, and St. Petersburg to Smith.

At their desks, each writes neatly for the teacher's inspection, all he knows about his topic, also more briefly, items about as many of the others as time permits. When the recitation comes, call it a reception which is attended by people from the places on the list. Each one is supposed to live in the place upon which he made special preparation. The teacher may say, "Cora has just arrived from Crete." Then hands go up and various classmates greet her with remarks or questions showing their knowledge of her home. Such as, "I am glad Crete is being called by its old name instead of Candia as the Turks called it." "Probably the lemon crop will be a failure on account of the war." "Have you visited Jupiter's cave on Mt. Ida?"

When the knowledge of her class-mates has been exhausted, Cora adds, "I live in Sphakia, a mountain province. Every rebellion since Crete was conquered by the Romans has been started or warmly seconded by the Sphakiots. They are as liberty-loving as the Swiss mountaineers. They still wear the national costume, a kilt skirt, high boots, fancy jacket, and cap. They were such famous archers that it is only recently that they consented to exchange their arrows for guns."

Next Tommy Jones announces, "I shall soon return to Japan." Questions follow: "Did you ever ride in a jinrikisha?" "Were you at home when the tidal wave came?" "Do you think Japan will ever get possession of Corea?"

Tommy closes with, "I have heard that Japan would like to buy one of the Phillipine islands from Spain."

So the reception goes on, all making liberal use of geographical stories. If the teacher and pupils enter into the spirit of it, it is not only an excellent desk work and review, but aids in giving ease and self-possession to pupils, enabling them to make the most of their knowledge.



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**PRIMARY DEPARTMENT.**

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the Anderson Schools.*

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**THE CHILD STUDY CONGRESS.**

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Indiana held her first meeting for the consideration of child study in Bloomington the first week in May. Col. Parker, of the city training school of Chicago, Dr. Van Liew, of the Illinois State Normal, and G. Stanley Hall, president of Clark University, Worcester, Mass., made special addresses, and President Hall appeared before the teachers three times. No one could listen to these addresses without feeling that a wide field in the education of children is almost unknown, but that there are men of signal ability who are making the most careful study of these problems, hoping to find a solution.

It is impossible to give even a meager account of the many helpful things that were given at this meeting, but I shall speak of a very few that have a close connection with the practical work of every teacher.

1. The school makes too great a point of the knowledge side of education. It is this basis that is used as a test for entrance to colleges and universities, and the same test applied to see if the pupils have reached the required standard for graduation. But the life in which the pupil lives outside of school, and which he must live after he leaves school, show that this qualification is only one of many.

The child must learn to be self-helpful, and helpful to other people. He must be able to live with other people; to make himself an integral factor; to assume his share of responsibilities; to help lighten the burdens of others, and enter with them into schemes for the benefit of the whole. In short, the child must be enabled to live the community life.

Then, too, the child must be industrious and honest. These are essentials for a successful life. In addition to all these, the child must be trustworthy. He can not assume his legitimate part in this community life if he fails in being worthy of the trust of the people with whom he lives.

These qualifications are, after all, the essentials for a successful life. But we forget that they are, and continually strive both

at home and at school to see that the pupil gets good grades. The child that is led to work for the per cent. that may be attached to his paper is forming a habit that later will be destructive of his own highest interest.

2. **HEALTH.**—It might almost be said "For what does it profit a man if he gain the whole world, and lose his own health." Without good physical health it is almost an impossibility for even a genius to do more than ordinary things. It ought to be one great purpose of the school to preserve the good health of children already possessing it, and to improve the health of the delicate ones. Every form of work should be looked at from this standpoint. Hence, closer attention must be given to the ventilation of the school room. It is a sad fact that during the greater part of the year the children are compelled to sit in a thoroughly vitiated atmosphere.

The nervous system of the child is not considered in the work of most schools. The large muscles should be used to a far greater extent than at present, and the small ones should not be forced into precocious development. This has its bearing in the writing work. The attempt to have children make very accurately the letters and words in small spaces, and so small that finger movement is the only one they can use, is detrimental to the healthy growth of the child. Children tire in a very few minutes when doing this kind of work. They grow restless, uneasy—sometimes it is accompanied by twitchings of the mouth, hands, eyes. All fine work like pricking cards and sewing, tracing outlines by use of lentils or seeds, insisting on children standing to "toe a line" for even a short time, all have a tendency toward overtaxing the nervous system of the child.

Then, too, this nervous affliction sometimes shows itself in waste of energy. Some children stick out their tongues and twist their mouths when trying to write; others do this when doing any kind of small accurate work, where the small muscles of the eye are used as well as those of the hand. Sometimes the waste shows itself in the child swaying back and forth, fumbling a pencil or paper.

3. Healthy, normal growth of body probably demands many of the physical plays and exercise of muscular powers which the child does through impulse or instinct. This results in the perfection of the physical organization demanded by the existing

conditions of our present life. Such development probably results in a further atrophying of certain muscles which the race originally used, but which no longer play any part in the life as it is at present. There are over two hundred such muscles.

4. If the tail of the tad-pole is cut off, the hind legs never develop. Probably the reading and enjoyment of fairy tales, myths and legends answers in the mental development of the child somewhat of the same purpose that the tail of the tad-pole does in this animal's development into the frog. It is possible that the child who misses all the life that comes from reading these fairy tales, myths, and folk lore, misses the very part that is necessary to give fulness and tone to his after appreciation of beauty. The race was originally nature worshippers, and it may be best for the child to pass through a similar phase, for which, if he misses it, he will always lack a little of an all round development. There should be no conflict between heart and head; between science and sentiment.

5. Nature worship is the basis of religion and all art. The child should live with nature. It should not be a critical life, nor an analytic one. Counting the petals of the Spring Beauty, measuring its stem and determining the shape of its leaves, this, and this only, is not the kind to develop nature love. There must be a greater appreciation of the hidden life and force, the kinship to our own, the companionship we feel with the daisy, the robin, the moving cloud, and the gentle rain. The teacher can not lead the child into this higher nature study unless she herself feels and appreciates it.

6. One entire lecture by G. Stanley Hall was on "Adolescence." It is a mistaken notion to suppose that the study of babies is the only field for investigation and an intelligent notion of the demands of the individual. At no period is such a study more important than at this time, from about ten or twelve to twenty or twenty-three years. Boys and girls at this age look at things very differently from what they did when younger. It is probably the most critical period of their lives. There is too little appreciation of the physical and mental changes at this time by both teachers and parents.

7. The fact that children are born imitators is not applied in actual work as it should be. Children imitate manners, tone, action, dress, vocabulary and style of speaking. It is doubtful if

it is used as much as it should be in the reading work especially. The child should hear the teacher read the actual reading lesson just as he hears her read a study occasionally. We criticise a child for reading poorly when the truth is he does not know how it would sound if read well. Children frequently understand the meaning far better than their oral reading shows. Their ideals of oral reading are too often gotten only from other children who have no better vocal expression than they themselves.

These are a few of the helpful, practical points brought out by the different speakers. While each teacher may not be able to attend these general meetings, each one can be a member of the association, and by the payment of fifty cents receive all the matter printed that is given before the National Child Study organization. No teacher can afford not to be in touch with the work that is being done along this line of direct study of children.

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### SCHOOL WORK AND HOME STUDY.

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It is becoming more and more clear that home study should be supplementary to, and not preparation for the morrow's lessons in school. All observations that have been carefully made in an unprejudiced manner show plainly the injury wrought upon the child by its being allowed to study immediately after school, immediately after a meal, during a noon recess, before eating in the morning, or immediately preceding a school session. Superintendent Maxwell, of Brooklyn, N. Y., and his school board have put themselves on record in the clearest and most perfect manner possible. With the courage of their convictions founded on painstaking observation born of intelligent sympathy, the matter was presented to the parents and teachers of Brooklyn in a circular letter in which the following is expressed :

“No home study of any kind, except spelling and supplementary reading, shall be assigned to the pupils in any primary grade ; no home study requiring more than half an hour in any one day, except spelling and supplementary reading shall be assigned to the pupils in the four lowest grammar grades ; no home study requiring more than one hour in any one day, except spelling and supplementary reading shall be assigned to pupils in the four highest grades ; the solution of problems in arithmetic shall

not be assigned for home study in any primary grade or in any grammar grade except the first and second grammar, and no home study requiring more than two hours in any one day shall be assigned to the pupils in any high school grade."

Parents should never urge children to make extra efforts to obtain promotion nor show annoyance if they fail to obtain promotion. What children need for intellectual and moral progress is systematic, not spasmodic work. If, for any good reason, a child is not promoted or graduated at the end of a term, he should not be reprimanded, but encouraged to try again. Above all, parents should not, by finding fault with the teacher, weaken her influence for good.—*The Child-Study Monthly*.

#### NOTES ON PRIMARY NUMBER WORK.

Every primary teacher will find Mrs. Dillon's article on the scope of primary number work in this issue of the JOURNAL very helpful indeed. She gives some of most salient points of number as viewed by McLellan and Dewey and by Mr. Speer.

It can not be said too often that the idea of number is the result of an act of measuring a whole by some unit, and of these units there is almost no limit. There are two lines, one six inches long, the other three. If the 6-inch line represents one dollar, the 3-inch line represents a half dollar or fifty cents. If the 6-inch line stands for a year, then the 3-inch line stands for one-half a year or six months, or twenty-seven weeks. If the 6-inch line represents one dozen, then the 3-inch line represents a half dozen, or six. The fundamental act is one of comparison called measurement.

This comparison should begin with those easiest made; certain objects are larger or smaller than other, lighter or heavier, higher or lower, alike or different in color. A little later should come the accurate judgments on the same points. This object, A, is three times as long as that object B. A is twice as heavy as B. A and B are exactly the same color. A is four and half inches longer than B.

Exhaustively teaching one thing before taking up another, taking it so carefully that the point need not be referred to again, is not held in any other phase of education. It should no longer be offered as the reason for spending a month or six weeks on the

number 7 or 9 when the child is six years old. The teacher must remember that the child is much more easily exhaustive than is the subject. In such treatment of a number at this stage, the fine discriminations of thought and feeling are exceedingly difficult. While the pupil seems to see them at the time it is almost impossible to make them "stick."

Not all kinds of objects are equally valuable in leading children to see number relations. Counting the petals of a flower, the legs of a grasshopper, the wings of a butterfly are all very well for a phase of nature work, but the number value of such exercises is very small indeed. Objects best fitted for number are lines, surfaces, and solids. These objects are so similar in most points that the comparison for the sake of the number is easily and effectively made.

These are some of the points that are made in this new view of number work, and the results of teaching number in the past have not been so encouraging but that every primary teacher should be willing to examine any new notion concerning the work.

#### A LANGUAGE EXERCISE.



1.

This is a branch from the apple tree.

2.

This is a twig that grew on the branch from the apple tree.



3.

These are the leaves that grew on the twig that grew on the branch from the apple tree.



4.

This is a blossom that grew near the leaf that grew on the twig that grew on the branch from the apple tree.



5.

This is the tree with its blossoms so pink with its leaves and brown branches and small twigs and all, as I saw it last night in the garden.



HORACE LEMON, April 30, 1897.

In the two days preceding the one in which the lesson was given, I taught the new words required.

LESSON 1. I showed the children a branch from a tree. Led them to say, "That is a branch from the apple tree." Gave it to a child, he said, "This is a branch from the apple tree."

2. I broke a twig from the branch, and asked its name—"It is a twig." I asked on what it grew :—"It grew on the branch from the apple tree." At this stage, as they said "This is the twig that grew on the branch from the apple tree," they discovered the lesson was an old friend in a new dress. They were all animation.

It was very easy now for them to tell the story of the leaf which I took from the twig and of the blossom that grew near the leaf.

They had all seen apple trees in bloom the evening before. Each drew a tree as his mind pictured it and after talking of the color of the branches and blossoms and the location of tree, they were ready to tell me the whole story of the tree.—*Sarah E. Northcott, Anderson.*

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## **SCHOOL-ROOM DEPARTMENT.**

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### **THE MORNING TALK.**

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RHODA LEE IN CANADA EDUCATIONAL JOURNAL.

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I have been asked frequently if I thought this "moralizing" in the morning talk had any really beneficial influence upon the character of children. I always object to the term "moralizing." We don't do that—we simply present facts in as interesting and attractive a way as possible, generally in a story, and hope to give the children something to think about that will be an inspiration through the day. I firmly believe, even though I can not always see positive proof of it, that some good must result from honest teaching of ethical truths. I heard one of the best teachers I ever knew remark once that she could not teach without her ten minutes' talk in the opening exercises. She went on to say that she did not know how much good the children gained, but she realized the benefit it was to herself. However, I can testify that no one can be in her class room half an hour without seeing evidences of her training.

The kindergarten fashion of presenting truths in stories is one we can not do better than follow, provided we sufficiently impress the particular teaching. In addition to the story and consequent talk, Bible selections and quotations should be read and memorized.

It is not desirable to take a new subject every day. For such topics as *truthfulness, honesty, kindness to animals, courage, and obedience*, we can easily find material enough to last three or four days or longer. It is not difficult to find good stories illustrating these traits of character. Quotations bearing on these subjects are frequently met with in ordinary reading, and if entered, as found, in a book for the purpose, they would soon form a good collection. While any one subject is the topic for the morning talk, it is well to let the quotation remain on the blackboard.

The rule that should guide us in deciding the order of topics is that of the need of the class. If there is a want of punctuality, begin there ; that will lead to faithfulness, honesty, industry, etc. When a beginning is once made, there will be no lack of subjects, as one suggests and leads to another.

Some years ago I was appointed to take charge of a class that needed, more than anything else, an understanding of the word *honor*. They were industrious, truthful, and well-behaved as long as I was in the room and watching them, but there were not more than two in the class who did not think it perfectly right to prepare for a "jollification" the moment their teacher was out of sight. As I left them for the first time I put them "on their honor" to do the work I had assigned, but I discovered on my return that my appeal was but "empty words"—they did not understand. When engaged with a class at the board or with a visitor, the result was the same. "Prompt treatment needed here," was what I thought, and therewith the battle commenced. It waged for some weeks before we obtained a victory. After a series of talks on honesty, faithfulness, self-control, and kindred subjects, there was a decided improvement, but considerable training was required before the lax habits of former times had been overcome. It was sometime before I could leave my room and feel certain that every pupil would be true to the trust I placed in him, but that time came, and I never had more trustworthy scholars. As is generally the case, there were some who did not respond readily, but the children themselves had more to do with influencing them than I had. Class pride stepped in and helped on the work.

I may say that the severest punishment I could inflict upon a pupil who was untrustworthy was to take him with me when I had occasion to leave the class, or, if engaged at the board, have him sit beside me.



This part of the morning exercises may be varied by the teaching of a concert recitation, a hymn or song, or by asking the children to find stories or illustrations of a subject assigned. They may tell the story or bring a clipping to be read. The work is most important, do not neglect it. Don't think too much about results ; sow the seed, and trust for the harvest.

Quotations on *honor* :

- (1) "An honest man is the noblest work of God." *Burns.*
- (2) "There is nothing so kingly as kindness,  
And nothing so royal as truth." —*Alice Carey.*
- (3) "To thine own self be true,  
And it must follow, as the night the day,  
Thou canst not then be false to any man."  
—*Shakespeare.*
- (4) "Not gold, but only men can make  
A people great and strong;  
Men who, for Truth and Honor's sake,  
Stand fast and suffer long." —*Emerson.*

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### WHEN DOES THE NEXT CENTURY BEGIN?

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It appears that a great discussion is going on in London as to the time when the next century begins ; some say January 1, 1900, and others that the correct period is January 1, 1901. It appears farther that a similar discussion arose a hundred years ago, and the contest was so warm that serious personal battles grew out of it. I have looked for old papers here, but have found none that referred to the matter ; probably we had more serious matters on hand. What I would like to know is when it was settled that the eighteenth century ended ; did the law courts say December 31, 1799, or December 31, 1800? My impression is that it was December 31, 1799. If so, then December 31, 1899, will be the date in the present case.

The London *Times* says that if in writing 1896 we are using a cardinal number, the last day of the century is December 31, 1899, but if we are using an ordinal number, it will be December 31, 1900. It further says that, while great names may be quoted for the former, the weight of opinion is for the latter date.

The other class say the era began with 0, that a person writing a letter in the sixth month of that year would not have dated it "sixth month of 1st year of Christian era," but "6th month of Christian era." That when we say 1896, we mean as we do when 1896 feet is measured from a point ; at 1, one was completely measured off ; at 1896 that number was completed ; at the last second of the last minute of the last hour of the last day of the last month of 1899, the one hundred years will have been completed since the century began with 0 ; that the next century will begin January 1, 1900 ; in short, 1896 is a cardinal number ; that when we say January 1st *during the first day*—we end the month having 30 days on the 30th and not as the others would have us, on the 31st. Let 30 spaces be made.

The month begins with 0 ; from 0 to 1 is the first space, we use an ordinal number, meaning we are *in* the first day ; the last space is the 30th and when that is completed, 30 days have been completed. So of the century.

We began it with an o ; hence, when 1900 is reached, 100 years have been completed. Yet it is a curious fact that pretty smart fellows argue for 1901. But when the courts and newspapers have to use dates what will they fix on?—*Pierce Osborn in School Journal.*

PERFECTION is not essential to all that we know of life. Nothing that lives is or can be perfect ; part of it is decaying, part is nascent. All things are literally better, lovelier and more beloved for the imperfections which have been divinely appointed that the law of human life may be effort, and the law of human judgment, mercy.—*Ruskin*.

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## EDITORIAL.

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### REORGANIZATION OF THE STATE BOARD OF EDUCATION.

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All persons familiar with the history of the general educational bill that was before the last legislature know that the principal opposition to the bill was on account of the fact that it gave increased duties and powers to the State Board of Education. The opposition was organized by and came largely from the non-State college men, on the ground that the State Board as organized already had too much power. In short, they insisted upon a reorganization of the Board.

At present the Board is made up exclusively of ex-officio members—they are all members of the State Board by virtue of holding some other position.\*

Representatives of book houses and others who have had opportunity for extensive observation say that owing to the above fact, Indiana has one of the ablest and *cleanest* State Boards in the United States. The JOURNAL believes this to be true. The Board has been from the beginning and is now composed of able men whose integrity has not been questioned. But three of them represent the three State colleges and by virtue of their position on the State Board could, if so disposed, direct educational matters so as to specially favor their own institutions, and their own graduates. If they have ever done this, the JOURNAL has never found it out.

The non-State college people say "human nature is human nature," and if the State Board is given additional power to, not only license all the teachers of the State, but all the county and city superintendents and institute workers, it stands to reason that most men would favor representatives of their own institutions. The non-State men say that if the State college presidents do not use their positions on the State Board to the special advantage of their institutions, they should not object to going off the Board, and if they do use their positions for such a purpose, they should be compelled to go off.

The JOURNAL understands these three college presidents have plenty of work to do in connection with their own institutions and would be entirely willing to be relieved of their State Board duties, but they object to going off the Board "under fire." They feel that those who insist upon this reorganization, indirectly impeach their fair-mindedness, if not their integrity. The JOURNAL fully sympathizes with these men in this feeling, and is frank to say that nothing should be done that could be construed into a reflection on the good name of men who have done such faithful service for so many years. Of course the non-State college men mean no reflection but base their action on general principles.

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\*The State Board of Education is made up of the Superintendent of Public Instruction, the superintendents of the three largest cities in the State, the presidents of Indiana University, Purdue University and the State Normal School, and the Governor.

The JOURNAL suggests this: Let these three members of the State Board, themselves, come forward and lead in a movement for reorganization in the interest of harmony and the welfare of the schools. Valuable as the services of these men have been and are, the Board can be reorganized without them and still do good work. If they should all die, the educational work of the State would not stop. On the other hand, it is of great importance that the proposed legislation should be had. The proposed changes in the school law are far-reaching and will affect for good every teacher and every child in the State.

Every educational interest of the State pleads for harmony and co-operation among the educators of the State. If they will unite, they can get any thing reasonable they will ask. While they are divided, as at present, they can get nothing.

The JOURNAL suggests further, that if the governor is to appoint the additional members of the Board, his own official relation to the Board should cease. But if it is thought best that the Board should continue its ex-officio character, let the law be changed so as to leave out the three colleges and put in the superintendents of the *five* largest cities and the superintendents of the *two* largest counties not otherwise represented on the Board. This would add an element to the Board that is conceded to be very desirable and at the same time insure a high grade of men.

The JOURNAL believes that the non-State college men have nothing whatever to fear from the State Board as at present constituted, but at the same time, on general principles, it concedes the reasonableness of their position. It also concedes their sincerity and their desire to promote the highest interests of *all* the educational interests of the State.

The JOURNAL pleads for charitable criticism, co-operation and a pull altogether in the highest interest of the children for whom we are all working.

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#### GRAND ARMY NOT SATISFIED.

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The chairman of the committee appointed at the last national convention of the G. A. R. to investigate the subject of school histories says:

"After careful examination by members of the committee, it was the unanimous opinion that no histories in use as text-books give such an account of the war period as entitle them to commendation. The child without other sources of information would be entirely unable to understand that there was a difference in the patriotism of those who fought for the preservation of the national unity and those who fought for the destruction of the government. Some of those histories most extensively used are so unpatriotic in sentiment as to justify condemnation."

Does not such a sweeping condemnation lay this committee open to criticism? Is it possible that "*no histories in use as text-books*" are entitled to commendation?

A school history must cover the whole period of the country's existence from the "discovery" down to the present and it must be done in one small volume. The rebellion lasted only four years and yet General Grant filled

two large volumes in describing it. The school history can only give a limited space to this period. The soldier who was in a battle and knows its details feels that it should be adequately described, but the school history can not do this. It can only discuss principles and note the growth of ideas and take account of battles as mere incidents in this evolution.

The best school history is the one that portrays most faithfully the causes that lead up to the war and then notes in the truest way the results of the war and their effects on the life of the people. Detailed descriptions of battles and generals have little to do with this, except as they portray the character of those engaged in the struggle. A given battle may be the greatest event in the life of an individual, and yet be but a slight episode in the life of a nation.

So far as the writer knows, there is no school history that does not give the causes of the war and the results of the war; and with our schools filled with teachers who are the sons and daughters or near relatives, of old soldiers, there is no danger but that the boys and girls will be imbued with the spirit of patriotism, and taught to reverence the flag of their country, which has been saved to them at such great sacrifice.

Everybody believes in patriotism and believes in teaching it, but it should be remembered that the best patriotism in times of peace is faithfulness to every-day duties and to high ideals of citizenship. The best patriot to-day is he who is the *best citizen*, he who is doing most to make this land happy and prosperous. Patriotism always means devotion to the highest interests of one's country; and this means in time of war to go to battle and in time of peace to obey the laws and to conform to all the requirements of the noblest manhood.

A school history should teach boys and girls to respect and honor the old soldier, but it should not engender in their minds a feeling of enmity against any section of our re-united beloved country.

#### SOME FACTS ABOUT GREECE.

*Greece* which is now at war with Turkey is of special interest because of its past relation to everything which is best in the history of the world.

Its area is about two-thirds, and its population about the same as that of Indiana. It is much cut up by inlets and gulfs and its surface is broken and mountainous. It is said that a person can not remain within its boundaries and get forty miles from the sea, or ten miles from the hills or mountains. Only one-sixth of its surface is cultivated.

Thessaly and a part of Epirus became a part of Greece in 1886. This was brought about by the influence of some of the other European powers.

Turkey conquered Constantinople in 1453 and a few years later Greece became a Turkish province and remained such till 1821-9. Since 1829 it has been independent by the help of other European powers.

Its present king placed there by outside influences is the son of the king of Denmark and his wife is the sister of the czar of Russia. The king has only limited powers as the country has a constitution and is largely governed by a national council elected by the people.

It has a compulsory school law but it is not strictly enforced. It has a university in Athens which is attended by about 2,500 students.

The island of Crete has been the cause of the present war. It is under Turkish rule, but its population is nearly all Greek. Turkey is always an oppressive ruler and Crete very much prefers to be attached to Greece. A rebellion broke out in the island and the Greeks sent soldiers to give assistance. Owing to the superior strength of Turkey, there was no doubt from the beginning as to the outcome of the war, if there should be no outside interference. The Greeks expected that once war was declared, several of Turkey's European provinces would rebel and then Turkey would have to make terms. No assistance came and the Turks gained two or three decisive battles in Thessaly and everything looked as though the Turkish army would march into Athens when the six great powers of Europe, led by Russia, called a halt, and Turkey has been asked to stop fighting. At this writing an armistice has been declared and it now looks as if "the powers" would dictate terms of peace. Turkey is entirely dependent upon these powers.

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WE NOW have a compulsory education law; let us have next a compulsory ventilation law. If children are compelled to go to school, the school officers should be compelled to provide pure air for them to breathe while there.

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THE readers of the JOURNAL will be interested in Dr. Burrough's article found on another page. The JOURNAL wishes to give opportunity for the fullest discussion of all questions involving educational principles and policies.

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MORE THAN FIVE HUNDRED teachers have "forgotten" to pay for the JOURNAL as per agreement. A single subscription is a small amount, but think of *five hundred!* and then think of the editor!! Did you ever hear of the "Golden Rule?"

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"ONE-HALF of one per cent. of the population of the United States are college graduates. From this comparatively small number are drawn forty-six per cent. of the U. S. Representatives, fifty-four per cent. of the U. S. Senators, sixty-two per cent. of the Vice-Presidents, seventy per cent. of the Speakers of the House, and ninety per cent. of the U. S. Chief Justices."  
—*The Nebraska Wesleyan.*

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THE STATE BOARD OF EDUCATION, at a recent meeting, granted professional and State licenses to a goodly number of applicants, granted a commission to the high school at Broad Ripple and re-commissioned the high school at Brookville and also prepared lists of examination questions for the next six months. It also appointed Superintendent Geeting to act with Secretary Bicknell and the county and city superintendents in selecting truant officers for the various counties and cities in the state.

INTER-STATE CERTIFICATES for teachers should be the next move. Iowa has just passed a law authorizing its state board of examiners to recognize teachers' certificates and diplomas from other states when of equal value with those issued by the board. Good for Iowa. Such a law should exist in every state. In order to simplify this matter, the National Association should take hold of it and fix a minimum standard for state certificates; then all licenses issued by states adopting this standard should be *national*.

THE population of the city of New York, according to the police census of 1895, is 1,851,060. The population of Brooklyn, according to estimates based upon the state census of 1892, is 1,142,728. The population of the future borough of Queens, as estimated in 1896, is 46,502 for Long Island City, 22,500 for Flushing, 24,500 for Jamaica, 25,000 for Newtown, and 8,200 for part of the town of Hempstead, or about 127,000 in all. The population of Staten Island was estimated at 65,000 in 1896. The aggregate population of the greater New York is therefore substantially 3,165,000.

#### NATIONAL EDUCATIONAL ASSOCIATION.

Indiana teachers should keep in mind the date of the meeting of the N. E. A. at Milwaukee, July 6-9. The Council will meet July 5, in the morning.

The programs for the general association and all the departments are made up of the best material the country affords. Everybody can find just what he wants. The person who goes for the sake of the Association will be well repaid and the person who goes for the sake of the associations will also be repaid. The person who goes for the sake of the outing and the side trip will be repaid likewise.

Indiana has not in the past been as largely represented at these meetings as many of the neighboring States; let it make a better record this year. A single fare for the round trip plus \$2 association fee, has been secured.

For particulars address W. R. Snyder, Muncie, who is State manager. For information as to entertainment or local matters, address William George Bruce, Milwaukee, Wis. Good boarding can be had at private houses if desired, at \$1 a day. A spacious room has been engaged in the principal hotel as Indiana headquarters.

#### A MOTHERS' MEETING.

Mothers' meetings have been held in many places in this State and invariably with good results. The writer recently attended one in school No. 10, Indianapolis, which was under the direction of supervising principal, Miss Henrietta Colgan. This was a second meeting, the first having proved a great success. About one hundred mothers were present. The main topic for this meeting was "How to Care for the Health of Children." Papers

were read by Miss Ellen Graydon and Miss Julia Ashley, teachers ; and by Mrs. Kellogg, a mother. The papers were all good and impressed many practical points. After the reading of the papers a discussion followed.

The conclusion was reached that the health of the children is of primary importance and should be carefully looked after both at home and in the school. It was urged that health is not a matter of chance or "luck" but the result of observing physical law, and that one's health is largely in his own hands. It was further claimed that the physical laws are God's laws and that a willful violation of them is a *sin*.

Incidentally, the duty of training children to cheerfully obey, not only physical but moral and social laws, was discussed. Arrangements were made for renewing these meetings next school year.

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## QUESTIONS AND ANSWERS.

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### STATE BOARD QUESTIONS USED IN APRIL.

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WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The handwriting of each applicant will be considered in itself, rather than with reference to the standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

GUIZOT'S HISTORY OF CIVILIZATION.—1. What was the theory of the feudal monarchy? Did the facts sustain the theory?

2. What was the character of the European monarchy in the twelfth century?

3. Explain how certain early social elements in European life have been retained.

4. Discuss the attempts at political organization from the twelfth to the sixteenth century.

5. *a.* Mention four events which mark the beginning of modern history.

*b.* Mention some notable inventions that mark the beginning of modern history.

6. Trace the acts and reigns tending to establish French absolutism. What were some of the influences tending to the rise of a strong monarchy in England?

7. What was the condition of Germany in this period? (*Any four.*)

READING.—1. What should a child of average ability under a faithful and efficient instructor accomplish in reading during his first year's attendance at a well graded school?

2. What would you hope to have the same child accomplish during its second year under similarly favorable circumstances?



3. Name the titles of two books that you would recommend as supplementary reading matter for first year grades; two others that you deem suitable for second grades?

4. What would you suggest as appropriate matter for the teachers of these respective grades to read occasionally to their pupils? What is the pedagogical purpose of such reading?

5. If you would drill the pupils of either of these grades in phonics, state how early you would begin such drill and state your reasons for so doing.

6. (a) What is the scope of the work for first *third* of the first school year in reading as given in the State Manual? (b) Name as many as *five* of the points to be considered in the presentation of reading lessons as given in the State Course of Study, *second year*. (*Any five, not omitting 6.*)

PHYSIOLOGY.—1. Name some cases in which your own person or that of a pupil may be utilized for the purpose of experiment or observation.

2. What features are essential in any system of physical training to render it popular and beneficial in our schools?

3. Describe the digestive tube as a whole.

4. How does blood look under the microscope?

5. What are the chief dangers from impure air?

6. Explain one source of injury to the nervous system?

7. Describe briefly the organs of speech.

8. What are the three great organs of excretion? Describe one of them.

9. What four things have happened to a person nearly dead from drowning? What must be done to resuscitate such a person? (*Any seven.*)

GEOGRAPHY.—1. Give the shape of the earth in geometrical terms; difference of its diameters, and five proofs of its rotundity.

2. What are zones? How determined?

3. What should be the aim of map drawing in the study of geography? Of the use of the sand box and the moulding board?

4. What common agricultural products were not known to the world until the discovery of America?

5. Through what waters would you pass in the shortest all water route from Liverpool to Bombay?

6. What five great religions had their origin in Asia? State briefly the leading tenets of these religions. (*Any five.*)

ARITHMETIC.—1. Divide  $6 \times 12 \times 15 \times 36$  by  $3 \times 4 \times 5 \times 48$ . What principle is involved in this problem? Write full explanation.

2. What use would you make of division in teaching fractions? Discuss fully.

3. Two boys counting their money found that one had  $\$ \frac{3}{4}$  and the other  $\frac{1}{2}$  as much. What part of a dollar had each? Let the solution of this correspond to the grade in which such work is found.

4. Give analysis of the following:  $\frac{1}{2} + \frac{1}{3}$ ;  $\frac{1}{2} \times \frac{1}{3}$ .

5. What are the measures of area? Indicate some "busy work" suitable for a first year pupil in the study of area.

6. Three pounds of sugar are needed for canning 5 quarts of strawberries; how many pounds of sugar are required for  $3\frac{3}{4}$  bushels of berries?

7. 20% of the selling price is loss, what is the rate of loss? Make a concrete problem requiring the same solution. Solve and prove the solution.

8. Two dimensions of right-angled triangles being given as follows, find the third dimension:

Base.	Perpendicular.	Hypotenuse.
$1\frac{1}{2}$	2	?
9	?	$11\frac{1}{4}$
$2\frac{1}{4}$	?	$3\frac{3}{4}$
$8\frac{1}{4}$	11	?
?	$7\frac{1}{2}$	$12\frac{1}{2}$

9. Discuss the arithmetic work of the first three years in the State Manual.

10. What are the ends to be secured in teaching arithmetic?

GRAMMAR.—1. Name the essential parts of a sentence. Illustrate.

2. State how each word is used in the following:

“And from the blessed power that rolls  
About, below, above,  
We'll frame the measure of our souls;  
They shall be tuned to love.”

3. Illustrate in a sentence four relations of the noun.

4. Illustrate the difference between the use of a verb and a participle. Explain.

5. Use the word “like” as an adjective and as an adverb.

6. How would you present the subject of mode to a class? How could the composition work be brought to bear upon the subject of mode?

HISTORY.—1. What are the remoter causes of the Mexican War? What is the judgment of disinterested nations as to the justness of that war?

2. Give a sketch of the career and an estimate of the character of Aaron Burr. What have you read on this subject?

3. Would you have your classes study English history before attempting American history? Why?

4. What has been the effect of a decreasing passenger rate on the American railways? Discuss fully.

SCIENTIFIC TEMPERANCE —1. Tell how a piece of muscle or brain or any animal tissue is affected by being placed in alcohol? Does the specimen thus treated weigh more or less than it did before? Why?

2. If alcohol is used as a beverage does it act upon the various tissues as in the above experiment? Explain why it does or does not.

3. Does alcohol undergo any chemical change in the animal body?

4. Explain how the sensation of warmth is produced by a drink of alcohol.

5. How does the excessive use of alcohol affect the kidneys? Does alcohol affect other glands in the same way that it affects the kidneys or are there any exceptions?

6. Why are people who are under the influence of alcohol less sensible to pain?

7. How does contact of tobacco with the mouth and throat affect the mucous membrane. (Any five.)

SCIENCE OF EDUCATION.—1. State three distinct thoughts of Herbart which you consider fundamental.

2. What is the central thought of the kindergarten?

3. For what does Pestalozzi stand in education?

4. What are the excellences and the defects of Rousseau's educational theories?

5. On what ground would you exclude from the school all sectarian religious instructions?

6. What is the aim of the general child-study movement of our time?

### ANSWERS TO PRECEDING QUESTIONS.

GRAMMAR.—1. The essential parts of a sentence are the subject and the predicate; as, The sun is shining. Here "sun" is the subject, and "is shining" is the predicate, of which "is" is the copula and "shining" is the attribute.

2. "And" is a conjunction; "from" is a preposition, showing the relation between "frame" and "power;" "that" is a relative pronoun subject of "rolls;" its antecedent is "power;" "About, below, above" are adverbs, modifying "rolls." The third line is an independent proposition; so, also, is the fourth; neither presents any difficulty.

3. Smith, the gardener, sent his brother's son to the city. In this sentence, "Smith" sustains a subjective relation to "sent;" "gardener" sustains an appositive relation to "Smith;" "brother's" sustains a possessive relation to "son;" "son" sustains an objective relation to "sent."

4. The *verb* is used as one of the essential elements of a sentence. (See question 1.) It is used to assert. The *participle* is used as (a) a noun, (b) an adjective, or (c) an adverb; as, (a) He is engaged in *cutting* wood. We heard of his *being promoted*. (b) Smith, *being* a prudent man, kept still. Truth *crushed* to earth will rise again. A spirit of joy seems *breathed* o'er the world. (c) Christians sometimes become *shouting* happy. The water is *scalding* hot. The participle is never used to assert.

5. As an adverb, "He walks *like* his father." As an adjective, "She looks *like* her father."

6. The subject of mode should be presented inductively as nearly as possible. From the reading lesson, from the pupils' compositions, etc., there should be collected all the different verb-forms that can be found; the teacher should have these arranged and classified in accordance with certain ideas brought out by proper questions. In time, such work will lead to the building up of the complete conjugation. In this work, the teacher should question carefully in regard to the nature of the thought expressed by the different forms. After the arrangement and classification are complete, the pupils may be directed to form definitions of each different phase of expression, which work will be in line of composition work.

UNITED STATES HISTORY.—1. Almost from the beginning there had been a contest between the North and the South over the admission of states. The admission of a state without slavery put into the senate two more members likely to vote for northern interests. The admission of a state with slavery put into the senate two more members certain to vote for southern interests. The power of the North and that of the South were kept fairly balanced up to the admission of Texas, when the slave states numbered fifteen and the free states numbered thirteen. Although the slave states, at this time, were ahead, *there was no more territory* out of which more slave states could be made, and there was an abundance of territory, in the north and northwest out of which many free states could be made. The desire to extend slavery, to increase the number of slave states, was intense, and took such possession of the southern politicians that they were willing to undertake extreme measures to accomplish their ends. The danger and difficulty in the way of over-riding the Missouri Compromise led to the idea of acquiring more territory south of  $36^{\circ} 30'$ . It could be done by pushing the quarrel with Mexico. Thus the desire of the South to extend slavery and to keep, if possible, a safe majority in the senate, was the remote cause of the Mexican war. Disinterested nations regarded the Mexican war as having been forced upon Mexico without a just cause.

2. Burr was a graduate of Princeton. He served in the army during the Revolution, up to 1779, when he resigned and became a lawyer, etc. (See Biog. Dict.) His moral principles were unsound and he had no general convictions. His habits were licentious. He was a master of intrigue though to little purpose. He was a respectable lawyer and speaker, but lacked the qualities of a statesman. Dauntless resolution and cool possession never forsook him.

3. Not in the regular way. If at all possible, the class should study so much of the history of *Europe* (including, of course, parts of *English* history) as pertained directly to the discovery and early history of America. Such a knowledge of European history gives the pupil the causes that led to the discovery of America, and an insight into the beginning and growth of nearly all the ideas, customs and institutions that became prevalent in the American colonies.

4. The effect of a decreasing passenger rate on the American railway has been to increase the amount of travel sufficiently to increase the income of the railroad companies; and this in time has led in a general way to the improvement of their roads and coaches. This increased travel causes the spread of ideas and makes the different sections of the country much better acquainted with each other, thus tending to unify the people into a strong compact government.

GUIZOT'S HISTORY OF CIVILIZATION.—1. See page 258.

2. The power of the king became greatly increased, through his being called upon, now and then, to intervene in matters of dispute. His influence as arbitrator gradually extended farther and farther from his place of residence till at last he was regarded as supreme authority, and a new idea prevailed—that of a "great magistracy" which could secure peace and protection to the people, and pronounce judgment in case of differences.

3. Attempts were made to bring about union without destroying diversity; failure was the result, though union was accomplished. Two ancient social elements were retained—the government and the people. Some traces of the ancient diversity of elements still exist, such as theocracy, aristocracy, etc., but they have no distinct existence; they are under control of the general sentiment, customs and authorities of the country.

4. Most of these attempts were prompted by selfishness and tyranny. A few arose from worthy motives. Most of them were unjust, unreasonable and arbitrary. There were two kinds—(a) One having for its object the predominance of one of the social elements—sometimes the clergy, sometimes the feudal nobility, sometimes the free cities—and making all the others subordinate to it, and in this way seeking to introduce unity. The attempts on this line were open to selfishness and tyranny. (b) The other proposing to cause all the different societies to agree and to act together, leaving to each portion its liberty, and ensuring to each its due share of influence. The attempts on this line were many of them successful, but republics always had to contend with foreign sovereigns, and hence could not endure or extend their limits. (See pp. 266 to 278.)

5. Four events which mark the beginning of modern history are—(a) Discovery of North America; (b) the revival of learning and the flourishing of the fine arts, i. e., the *Renaissance*; (c) the discovery of a new route to India, around the southern point of Africa, by Bartholomew Diaz, 1486; (d) the conquest of Mexico and Peru; (e) the capture of Constantinople by the Ottoman Turks. Some notable inventions that mark the beginning of modern history are—(a) the invention of gunpowder, and its application into use in firearms; (b) the invention of printing by movable types; (c) the invention of the mariner's compass.

6. The French government began to take on absolute power at the accession of Charles VII. The formation of a standing army and permanent militia, the establishment of a perpetual tax, and the better organization of the administration of justice, contributed largely toward the strengthening of this power. Louis XI introduced the policy of "management and prudence," intellectuality and cunning, in the place of force, in government. Under Charles VIII and Louis XII, France continued to gather strength and unity. (pp. 294-296.)

Some of the influences tending to the rise of a strong monarchy in England were the Hundred Years' War and the War of the Roses. Both of these events contributed to the upbuilding of royalty (p. 299), for, in carrying on the wars, the kings were compelled to use absolute power, and its use and success in war brought about its exercise at other times, and centralized power in the king was greatly strengthened.

7. At about this time, imperial power in Germany became more fixed and powerful. "Election was merely a sanction given to hereditary right." Maximilian established a permanent militia, and all possible means were taken for the advantage of central authority. (p. 299.)

READING.—1. During the first year's attendance in school, the child, under efficient instruction, can be led to the mastery of any average first

reader; and in addition, he can be given a knowledge of at least 200 other words not found in his reader. By a knowledge of these extra words, we mean that he will be able to spell them, to pronounce them and to use them understandingly. And if the opportunity is given him, he will read through a supplementary first reader of a like grade.

2. During the second year's attendance under similar circumstances, a child is able to master the second reader, to learn thoroughly about four hundred additional words, and to read through understandingly two supplementary second readers of like grade.

3. For first year grade, the following books are desirable:—Cyr's Primer, Cyr's First Reader, The Werner Primer, etc. For second year grade, the following books are desirable:—Part of "Nature Myths," Science Reader, Book II, Cyr's Second Reader, etc.

4. Appropriate matter for teachers to read to such grades is literature that appeals to their feeling and to their imagination and that adds to their knowledge. The pedagogical purpose is to cultivate feelings that are generous, sympathetic, noble, etc., to add to their general knowledge of the world around them, and to put them into a condition that causes them to wish to know more and to read more. That teachers may be well prepared to give such instruction, they should be well informed in regard to those selections from works on mythology and from the standard poets, that are within the comprehension of the children. And they should read to them such books as "Big Brother," Science Readers, I, II and III, Stories of Colonial Children, Stories for Children, etc.

5. On beginning the second reader, children should have drill in phonics. They are then old enough to take this kind of instruction with profit. The benefits derived from it are good articulation, voice culture, and a knowledge of the powers of the characters, or symbols.

6. See State Manual.

PHYSIOLOGY—1. The "person" of a pupil may be used to show the use and location of many of the bones and muscles; the arm illustrates well the action of the lever, and several points touching circulation and respiration may be shown by use of the person of a pupil.

2. The essential features are moderation, regularity, fitness, and an effect that is, as nearly as possible, general to the whole body.

3. The digestive tube is quite long, and varies in size and form at different positions to make the different organs of which it is composed. Throughout its whole extent it is lined by a sort of skin—the *mucous membrane*—in which are imbedded many glands, nerves and bloodvessels. It also has a sub-mucous coat and a muscular coat. Not all of it is tubular, the pharynx being irregular in form, and the stomach being shaped somewhat like a pear. (See pp. 125, etc., Adv. Phy.)

4. (See page 72.)

5. The chief dangers from impure air are—(a) an insufficient supply of oxygen, resulting in a feeling of depression and perhaps suffocation; (b) the contracting of some disease, caused by the germs that are diffused through the air.

6. One source of injury to the nervous system is the use of intoxicants; the use of opium is another; severe and prolonged mental effort, without sufficient exercise and relaxation, is another.

7. The mouth, tongue, lips, teeth, pharynx, and larynx, constitute the vocal apparatus. (See pp. 127, 128, 129, 133, 180, 181 and 182.)

8. The three great organs of excretion are the skin, the lungs, and the kidneys. (See pp. 188-192.)

9. (a) Water has entered the lungs; (b) carbonic acid gas has accumulated in the blood; (c) the activity of the nerve centers of the brain has been deadened; (d) the heart has ceased to beat. To resuscitate the person—Place the body in the most favorable position for the full expansion of the chest. Imitate the natural movements of respiration. Persist in all possible efforts to induce breathing, and to promote warmth and circulation.

**GEOGRAPHY.**—1. The earth is an oblate spheroid. The difference between its diameters is about twenty-six miles; five proofs of its rotundity are as follows—(a) the earth's shadow on the moon always has a circular outline; (b) by traveling constantly in one direction persons have arrived at the place of starting; (c) the curvature of the sea; this is very noticeable in observing the arrival or departure of a vessel; (d) the rising or setting of stars as we approach or recede from one of the poles; (e) the actual measurement of an arc on the surface of the earth.

2. Zones are belts surrounding the earth, and are mathematical or climatic. The former are determined by the inclination of the earth's axis to the plane of its orbit; the latter partially coincide with the former, but vary through the agencies of heights of land, ocean currents, winds, etc.

3. In the study of geography, map-drawing should simply aim at the representation of the general outline, the most prominent features of elevation and of water courses, and the location of the chief cities. In addition, any other prominent or important features, such as mineral deposits, lakes, routes of travel, etc., should be denoted in some simple definite manner. The sand box and moulding board are used to represent elevation, depression, watercourses—in short, relief forms.

4. Indian corn, potatoes and tobacco.

5. See map.

6. *Brahmanism*—the belief in a One First Cause acting through the triad—Brahma, the creator; Vishnu, the preserver; and Siva, the destroyer.

*Buddhism*—The Buddhists do not believe in a personal God, but hold that *Buddha*, or the principle of a divine intelligence, has become incarnate in certain illustrious and holy men. It "preaches the final salvation of man from the miseries of existence through the power of his own self-renunciation."

*Christianity*—One God and one mediator between God and man—the man Christ Jesus.

*Mohammedanism*—There is no god but God and Mohammed is his apostle.

*Zoroastrianism* "recognizes the dual principle of good or light, and evil or darkness," with a belief in the ultimate triumph of the good spirit.

ARITHMETIC.—1.  $\frac{6 \times 12 \times 15 \times 36}{3 \times 4 \times 5 \times 48} = 13\frac{1}{2}$ .

There are two principles involved in this question:—(a) Rejecting a factor from a number divides the number by that factor; (b) dividing both dividend and divisor by the same number does not change the quotient. The explanation of the process is apparent.

2. A fraction being the expression of an "unexecuted" division, the correspondence between the numerator and the dividend, and that between the denominator and the divisor are points that must be made clear to the pupils. These properly understood, the processes in fractions are more easily comprehended.

3.  $\$1 = 75$  cents;  $\frac{1}{3}$  of 75 cts. = 15 cts.;  $\frac{2}{3}$  of 75 cts. = 3 times 15 cts. = 45 cts. =  $\$1\frac{1}{2}$  =  $\$1.50$ , the part of a dollar the second boy had.

Or, since one boy has  $\$1$ , the other boy has  $\frac{2}{3}$  as much, he has  $\frac{2}{3}$  of  $\$1$  =  $\$1.50$ .

4.  $\frac{3}{4} + 1 = \frac{7}{4}$ . Any number divided by unity gives the same number for the quotient.  $\frac{2}{3} + \frac{1}{3}$  will give *seven times* as much as  $\frac{2}{3} + 1$ ; for decreasing the divisor correspondingly increases the quotient,  $\frac{2}{3} + \frac{1}{3}$  will give *one-sixth* as much as  $\frac{2}{3} + \frac{1}{3}$ ; for increasing the divisor correspondingly decreases the quotient. Hence, we have,  $\frac{1}{3}$  of 7 times  $\frac{2}{3} = \frac{1}{3} \times \frac{7}{3} = \frac{7}{9} = \frac{1}{3}$ . The quotient bears the same relation to the dividend that unity bears to the divisor.

$\frac{2}{3} \times 1 = \frac{2}{3}$ . Any number multiplied by unity gives the same number for the product.  $\frac{2}{3} \times \frac{1}{2}$  will give *one-half* as much as  $\frac{2}{3} \times 1$ ; and  $\frac{2}{3} \times \frac{2}{3}$  will give *five times* as much as  $\frac{2}{3} \times \frac{1}{2}$ ; hence, we have,  $5 \times \frac{1}{2} \times \frac{2}{3} = \frac{5}{3} = 1\frac{2}{3}$ . The product bears the same relation to the multiplicand that the multiplier bears to unity.

5. The common measures of area are the square inch, square foot, square yard, square rod, the acre and the square mile. For busy work, pupils may be required to draw or mark off square inches on paper. These may be cut out and used in estimating surface.

6.  $3\frac{3}{4}$  bu. = 116 qts.  $5:3::116:69\frac{1}{2}$ ; hence,  $69\frac{1}{2}$  pounds of sugar are required to can  $3\frac{3}{4}$  bushels of strawberries.

7. Let selling price = 100%; then 120% is the cost, and the rate of loss is  $\frac{1}{5}$  or  $16\frac{2}{3}\%$ . A man bought a horse for \$120, and sold it at a loss of 20% of the selling price. Required the rate of loss. The selling price + 20% of the selling price = the cost. Hence  $\frac{6}{5}$  of the selling price = \$120;  $\frac{1}{5}$  of selling price = \$20; selling price = \$100.

Proof:—20% of selling price = \$20;  $\$100 + \$20 = \$120$ , the cost price.

8.	Base.	Perpendicular.	Hypotenuse.
	$1\frac{1}{2}$	2	$2\frac{1}{2}$
	9	$6\frac{3}{4}$	$11\frac{1}{4}$
	$2\frac{1}{4}$	3	$3\frac{3}{4}$
	$8\frac{1}{4}$	11	$13\frac{3}{4}$
	10	$7\frac{1}{2}$	$12\frac{1}{2}$

9. (See State Manual.) The limitation set in the first year that the pupils are to be taught from 1 to 10 inclusive is both unnecessary and unnatural. While much of the work must be within the limit, much of it can, with profit, be beyond it.



10. The chief ends to be secured in teaching anything are discipline and knowledge. Taking utility into consideration, we should direct the teaching so as to secure for the pupil the ability to solve, quickly and correctly, the common every-day problems that may occur in business life.

SCIENTIFIC TEMPERANCE.—1. When a piece of animal tissue is placed in alcohol, the alcohol extracts the water from the tissue, causing it to shrink and to become lighter. Though alcohol takes the place of the water in the tissue, it is yet lighter than it was before, alcohol being lighter than water.

2. The action of alcohol on living tissue is the same; for there is no condition in living tissue that can prevent the greed of alcohol for water from manifesting itself, (see Adv. Phy., p. 290); but the processes of life and the satisfying of its cravings, preserve the tissues in about their normal condition.

3. Authorities are divided on this point. Does alcohol arrest oxidation or does it undergo oxidation? Experiments on the human body do not account for the whole of the alcohol taken in, but this does not prove that it has undergone any chemical change, for that which has been combined with the water of the tissues might remain in the system as diluted alcohol a long time before it could pass off at any of the outlets. Active combustion or oxidation of alcohol in the human system would cause a very marked rise in the temperature, lasting for a considerable time; but this is not the result. The weight of evidence shows that it enters the animal system and leaves it the same compound.—*Richardson*.

4. When alcohol is first imbibed, it permeates the moist mucous membrane in its way to the stomach, coming in contact with the peripheral extremities of the colloid of the nerves supplying the gastric tract; the effect is reflected on the vessels of the skin. Hence, there is a temporary flushing and the escape of heat, and an agreeable but temporary sensation of warmth is caused.

5. When alcohol is taken into the stomach and absorbed into the blood, the kidneys immediately begin to discharge it from the body.

6. It paralyzes the brain, nerve centers and nerve fibers. The nerve cells by which nerve impulses are originated are deadened by the effect of the alcohol and can not thoroughly perform their function. The body in this condition loses much of its sensibility to pain.

7. The chief principle in tobacco is nicotine. Some of it passes into the mouth and throat where it deadens the nerves, weakens the muscles and produces irritation of the mucous lining. Cases of chronic sore throat and cancer have been brought about by the use of tobacco.

SCIENCE OF EDUCATION.—1. Three distinct educational thoughts of Herbart which are fundamental are:—(a) "The foundation of education should be made immovable by resting it upon *growth in moral character*;" (b) "All knowledge must be infused with feelings of interest, if it is to reach the heart and work its influence upon character by giving impulse to will;" (c) In the mental stores gathered by children, there must be organized unity, or concentration, to establish unity of character.—*McMurry*.

2. The central thought of the kindergarten is the formation of correct actions, habits and ideas while the being is in its most formative condition physically, mentally and morally; this to be accomplished largely by taking advantage of the child's natural inclination to play. All instruction is woven into their games in an easy, natural, interesting manner—the teacher, at all times, using all the opportunities that incidentally present themselves for accomplishing her purposes. *The guiding hand should possess all the characteristics necessary to success.*

3. "Pestalozzi" stands for, (a) the idea that powers or faculties are properly trained and developed by judicious and persistent exercise; (b) the idea that nature's instrument for development resides in one's soul; that the development of the soul is through interior culture. Above all, he stands for the incalculable power of continued and unremitting kindness over children of all classes.

4. Rousseau's ideas that education should begin at birth; that education comes from nature, from men, or from circumstances; that *how to live* is the most important part of education, are excellent, as are also many other of his ideas on education. Some of the defects of his educational theories are, (a) He would always take objects rather than their representations, no matter how impracticable they might be; (b) He would divide the first twenty years of life into three sharply defined periods, each subordinated to a single governing principle, when really at every age, an appeal must be made to all the motives that act on our will; (c) He would have a child taught to love as he is taught to read or write; (d) He would deny the child the opportunity of judging because sometimes it fell into errors of judgment.

5. All sectarian religious instruction should be excluded from the public schools, (a) Because religious instruction is not their function; (b) Because the schools are public and are supported by all sects; (c) Because there should be a complete separation of church and state.

6. The aim of the general child-study movement of our time is to see if there can not be organized definite plans of action that will (a) secure the child against a waste of energy and of life, which must and does result from a lack of proper knowledge of the child; (b) secure the child against injurious training; (c) secure the child against mismanagement, or neglect of his physical system; (d) give the child the opportunities needed for the proper growth, unfolding and development of all its powers.

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THE APOTHEGM, is the name of the annual publication by the senior class of the Madison high school. The class of '97 which numbers twenty-five has sent out a number which does them much credit. It is dedicated "To our beloved superintendent, Chas. McDaniels." The publication is artistically printed and arranged and comprises over one hundred pages. It contains pictures of the superintendent and high school faculty, of all the high school classes, of the Board of Editors, of the school trustees, of the school room, laboratories, &c., &c. It also contains the history of the senior class, the prophecy, the president's address &c., &c. It is certainly unique and artistic.

## FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by June 18. Be prompt. Write only on one side of your paper.]

### SOLUTIONS TO PROBLEMS.

**PROBLEM 178.** A bank, by discounting a note at 6 per cent., receives for its money a discount equivalent to  $6\frac{1}{2}$  per cent interest. How long must the note have been discounted before it was due?

Solution by M. E. H., North Manchester :

Let  $p$  = principal, or note ;  $r$  = rate of discount ;  $R$  = rate of interest received by the bank ; and  $t$  = time before the note was due ; then  $prt$  = the discount or sum received by the bank,  $p - prt$  = the sum the bank let out, and by the question,  $(p - prt) Rt = prt$  ; dividing out  $pt$ , and then performing the indicated multiplication, transposing and dividing by the coefficient of  $t$ , we find  $t = \frac{R - r}{Rr} = 1\frac{1}{3}$  years.

**PROBLEM 180.** Construct a quadrilateral, being given two opposite angles, the diagonals and the angle between the diagonals.

Solution by L. N. FOUTS, Brownstown :



Upon opposite sides of DB, the diagonal lying opposite the given angles of the quadrilateral, describe segments of circles which shall contain these given angles. Through the center of either circle, as E, draw GF, making with the diagonal DB the given angle between the diagonals, and produce indefinitely. Take EF equal to the other diagonal AC. With F as center, radius EG, draw the arc AH. Through A, draw AC parallel to FG. Draw the quadrilateral ABCD. It is the required figure.

*Proof:*—The given angles A and C must lie somewhere in the arcs DAB and DCB respectively. Since the diagonal AC must be parallel to FG, and its extremity C must lie in the arc DCB, its other extremity A must lie in the arc AH. Since A is found in the arcs DAB and AH, it is in their intersection. Since AC is equal in length to the second diagonal, forms the required angle with DB, and has its extremities in the arcs DAB and DCB, it is the required diagonal, and ABCD is the required quadrilateral.

**PROBLEM 181.** Equal weights of gold and silver are in value as 20 to 1, and equal volumes are in value as 1284 to 35. A certain volume is composed of equal weights of gold and silver. Find how many times more valuable it would be were it composed of gold alone.

Solution by J. C. GREGG, Brazil :

A volume of gold =  $1\frac{1}{3}$  or  $36\frac{1}{3}$ , the value of the same volume of silver. Also a mixture of equal weights of gold and silver = 21 times the value of its silver. Now, if the silver be replaced by an equal volume of gold, the value would be  $20 + 36\frac{1}{3} = 56\frac{1}{3}$  of the silver. Then  $56\frac{1}{3} \div 21 = 2\frac{2}{3}$ , ans.

**PROBLEM 182.** Required the greatest possible number of hills of corn that can be planted on a square acre, the hills to occupy only a mathematical point, and no two hills to be nearer than  $3\frac{1}{2}$  feet.

*We wish to call special attention to this problem. We received several solutions but none of them was correct. The correct result is 4165 hills. Who can solve it?*

**PROBLEM 183.** Two trains, one  $a$  and the other  $b$  feet long, move with uniform velocities on parallel rails; when they move in opposite directions, they pass each other in  $m$  seconds, but when they move in the same direction, the faster train passes the other in  $n$  seconds. Find the rate at which each train moves.

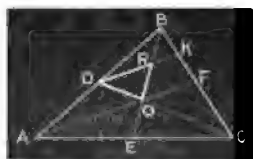
Solution by B. S., Connersville :

Let  $x$  = the number of feet the faster train moved in one second, and  $y$  = the number of feet the other moved in the same time;  $m(x+y)$  = distance traveled by both trains while passing when moving in opposite directions; therefore  $m(x+y) = a+b$ ; the faster train will gain  $x-y$  feet each second, and in  $n$  seconds it gains  $n(x-y)$  feet; therefore,  $n(x-y) = a+b$ ; solving between the two equations which we have found we have

$$x = \frac{1}{2} \left( \frac{a+b}{m} + \frac{a+b}{n} \right), \text{ and } y = \frac{1}{2} \left( \frac{a+b}{m} - \frac{a+b}{n} \right).$$

**PROBLEM 184.** Given a triangle whose sides are respectively one-third of the medians of a second triangle. Find the area of the first triangle in terms of the second.

Solution by JOHN E. HIGDON, Indianapolis High School :



Let  $ABC$  be any triangle and  $EB$ ,  $CD$ , and  $AF$  its medians meeting at  $O$ . Let  $K$  be the middle point of  $FB$ . Join  $D$  and  $K$ .  $DK$  is parallel to  $AF$ .  $OD = \frac{1}{2} CD$ .  $DR = \frac{1}{2} AO = \frac{1}{2} AF$ .  $OR = \frac{1}{2} OB = \frac{1}{2} BE$ . Therefore, triangle  $ODR$  has sides respectively equal to  $\frac{1}{3}$  the medians of triangle  $ABC$ . Since in  $ODR$  base  $OR = \frac{1}{3} BE$ , base of  $AEB$ , and altitude of  $ODR = \frac{1}{2}$  altitude of  $AEB$ ,  $ODR = \frac{1}{6} AEB = \frac{1}{18} ABC$ .

**PROBLEM 185.** A point  $P$  being given on the base of a triangle, draw a line across the triangle which shall subtend a right angle at  $P$ .

Solution by JOHN C. GREGG, A. M., Brazil :



Let  $ABC$  be the given triangle and  $P$  the given point. On  $BC$  describe a semicircle. Through  $P$  draw  $APD$ . Join  $B$  and  $D$ ,  $C$  and  $D$ , and draw  $PE$  and  $PF$  parallel to  $DB$  and  $DC$ .  $EF$  is the required line. The angle  $EPF$ , having its sides parallel to those of the angle  $BDC$ , is a right angle, and from similar triangles we have  $AB : AE :: AD : AP :: AC : AF$ . Therefore,  $EF$  is parallel to  $BC$ .

**PROBLEM 186.** A banker borrows a sum of money at 4 per cent. per annum, and pays the interest at the end of the year. He lends it out at the rate of 5% per annum, and receives the interest half yearly. By this means he gains \$100 a year. How much does he borrow?

Solution by **LESLIE C. MCCARTY**, Gosport :

The interest on \$1 lent at 5 per cent. per annum, paid half yearly, is \$.050625 ; the interest on \$1 borrowed at 4 per cent. is \$.04 ; \$.050625 — \$.04 = \$.010625, gain on \$1 ; \$100 ÷ \$.010625 = \$9,411.764+, sum borrowed.

**PROBLEM 187.** In a half mile race, A gives B 10 yards start, and beats him by 20 yards ; B gives C 30 yards start in half a mile, and is beaten by 60 yards ; which runs the faster, A or C ?

Solution by **OTTO CLAYTON**, Fowler :

In the first race, A gains 30 yds. while B runs  $\frac{1}{2}$  mile — 30 yds.; in the second race, C gains 30 yds. while B runs  $\frac{1}{2}$  mile — 60 yds.; C gains 30 yds. while B runs a shorter distance than when A gains 30 yds.; hence, C runs faster than A.

**PROBLEM 188.** If a terrestrial globe were made 36 inches in diameter, find the size on its surface of France, which contains 200,000 square miles, the earth's diameter being 7,920 miles.

Solution by **JOHN MORROW**, Charlestown :

$(7,920)^2 \times 3.1416 = 197,061,258.24$ , the number of square miles on the surface of the earth ;  $(36)^2 \times 3.1416 = 4,071.5136$ , the number of square inches on the terrestrial globe ; then  $\frac{4071.5136 \times 200000}{197061258.24} = 4.13+ =$  the number of square inches the surface of France would occupy.

**PROBLEM 189.** If the hands of a clock coincide every  $65\frac{1}{2}$  minutes, how much does the clock gain or lose in 24 hours ?

Solution by **L. N. FOUTS**, Brownstown :

Since the hands coincide every  $65\frac{1}{2}$  minutes instead of every  $65\frac{1}{4}$  minutes, the true interval, the clock loses  $\frac{1}{4}$  part of a minute every  $65\frac{1}{2}$  minutes, or the  $\frac{1}{174\frac{1}{2}}$  part of a minute every minute. In one day it loses  $24 \times 60 \div 174\frac{1}{2} = 1\frac{1}{4}$  of a minute.

**PROBLEM 190.** If 91 men, 28 women, and 35 boys can reap a field of corn 85 yards by 23 yards in 4 days of 10 hours each ; how many women must be associated with 13 men and 5 boys to reap a field 69 yards by 17 yards, in 21 days of 8 hours each ?

Solution by **OTTO CLAYTON**, Fowler :

By cause and effect method,

$$\left\{ \begin{array}{l} 91 \text{ men} + 28 \text{ women} + 35 \text{ boys} : 13 \text{ men} + x \text{ women} + 5 \text{ boys} \\ 4 : 21 \\ 10 : 8 \end{array} \right\} :: \left\{ \begin{array}{l} 85 : 69 \\ 25 : 17 \end{array} \right\}$$

whence  $x = 4$  women, answer.

## ANSWERS TO QUERIES.

56. Please explain through the JOURNAL the nature of the X-rays. Be definite.—JOHN BRUCE, Indianapolis.

Professor Münsterberg, of Harvard, said in *Science* in February, 1896: "With regard to the nature of the X-rays, it seems too early to say anything definite. Röntgen emphasizes the fact that they show no refraction and probably, therefore, move in all substances with equal velocity, and are transmitted by a medium which exists everywhere and in which are the molecules of the substances. That is they are *ether rays*, but *not transverse ether waves* like the visible or the ultra red or ultra violet invisible light; Röntgen supposes them to be *longitudinal ether waves*, the existence of which has for a long time been suspected by physicists. Researches regarding many other qualities of the new rays are in progress, and their results may clear up the theoretical interpretation."

For a statement of the results of later investigations, we take the following from the *Literary Digest* for January 2, 1897: "Although popular curiosity regarding the X-rays seems to have largely subsided, they have lost none of their interest for scientific men, and investigators are still diligently at work upon them on all sides. The results of their labors may be briefly summed up by saying that the apparatus for the production and use of the rays has been greatly improved and that hosts of new facts about them have been brought out; but we can not be said to know much more of their nature than when Röntgen, nearly a year ago, made his remarkable announcement to his co-workers at Würzburg. The Newton who is to co-ordinate the mass of facts that we possess and frame a simple, all embracing theory of them has not yet arisen. Prof. William A. Anthonig considers that the weight of proof is against any wave-theory of the rays, but he declines to champion any of the rival theories. Some of the highest authorities, it should be said, consider it probable that the rays are nothing but light rays, though of such extremely short wave-length as not only to be invisible but also to present all those differences from ordinary light that have been noted by observers. In view of this decided disagreement of the learned doctors, the ordinary reader will do well to suspend judgment."

57. What is meant by the Rosetta stone?—ROY NEWLAND, Zionsville.

The celebrated stele of basalt containing a decree of Ptolemy V (Epiphanes) in hieroglyphics, demotic, and Greek, which supplied the key for the decipherment of the ancient monuments of Egypt. It was found in 1799 by Boussard, a French officer, near Rosetta, and is now in the British Museum.—*Stan. Dict.*

## SOLUTIONS REQUESTED.

[Solutions that are requested will always receive prompt attention.]

Find the locus of the middle points of all straight lines that can be drawn from a given exterior point A to a given circumference.—*Wentworth's Geom., No. 136.*

Let D be the center of the given circumference. Draw any line as AC from the given point A intersecting the given circumference at C. Let B be the middle point of AC. Join A and D, D and C. Let G be the middle point of AD. Join B and G. BG is parallel to and equal to one-half of CD. Therefore, B the middle point of AC is at a distance from G equal to one-half CD. Now in a similar manner, we can prove that the middle point of any other line drawn from A to the given circumference is distant from G the same distance. Therefore, the locus of all such points is the circumference of a circle with center at G and radius equal to one-half CD.

To construct a trapezoid, having given the bases and the diagonals.—*Wentworth's Geom.*, No. 188.

Construct a triangle ACD having for its base AD the sum of the given bases of the trapezoid, and for its sides AC and CD the given diagonals of the trapezoid. From C draw CB parallel to AD. On AD cut off AE equal to one of the given bases of the trapezoid. From E draw a line parallel to CD intersecting CB at F. Join F and A, C and E. AFCE is the required trapezoid.

### PROBLEMS.

191. Given  $x^2 - \sqrt{x} = 78$  to find  $x$ .—W. E. OCHILTREE, Atty. at Law, Connersville.

192. Three times Jennie's age equals three-eighths of Gertie's age. In how many years will Gertie be just twice as old as Jennie?

193. Find the locus of all points in a plane whose distances from two fixed points are in a fixed ratio.—JOHN E. HIGDON, Instructor in Mathematics, Indianapolis High School.

194. Given  $x^2 + \frac{2}{3x} = 1\frac{1}{3}$  to find  $x$ , by quadratics.

195. Prove by a geometrical construction that the square on the hypotenuse of a right triangle is equal to four times the triangle plus the square on the difference of the sides.—O. M. SHEKELL, Oriole.

196. Two men dig a ditch two spades deep, the lower spade being harder digging than the upper. One of the men is stronger than the other. If the weaker man works on the easier "spade" and the stronger man on the harder "spade," they can throw out the same quantity of dirt in a given time; but if they exchange, the strong man can throw out twice as much as the weaker man in a given time. They begin to dig, one at each end of the ditch. Where will they meet and how should the pay be divided?—D. W. MCKEE, Lawyer, Connersville.

197. The sides of a triangle are in the ratio of 6, 8 and 9, and the area is 1012 square rods; find the sides.—AUSTIN CLAYPOOL, Connersville.

198. In a given triangle ABC, draw a parallel EF to the base BC, intersecting the sides AB and AC (or AB and AC produced) in E and F, so that  $BE + EF = BC$ , or  $BE - EF = BC$ .—"Chauvenet," chosen by J. C. GREGG, A. M., Brazil.

199. Given an angle of a triangle, the sum of the sides about that angle, and the perpendicular from that angle to the opposite side, to construct the triangle.—"Phillips and Fisher," chosen by J. C. GREGG.

200. The Great Northern Express leaves London at 8:30 P. M., and reaches Edinburgh (399 miles) at 6 A. M. At what distance from London, and at what time, would it be met by a train leaving Edinburgh at 10:20 P. M., and traveling  $38\frac{1}{2}$  miles an hour?

201. A's rate of working is to B's as  $\frac{1}{2}$  to  $\frac{1}{3}$ ; B's to C's as  $\frac{1}{4}$  to  $\frac{1}{5}$ ; C's to D's as  $\frac{1}{6}$  to  $\frac{1}{7}$ ; how long would they all together take to do a piece of work which A can do in 930 hours?

### CREDITS.

Leslie McCarty, Gosport, 188, 186; John Morrow, Charlestown, 186, 188; E. Fiske Allen, Tipton, 185; Otto Clayton, Fowler, 187, 183, 190, 180, 184;

J. C. Gregg, Brazil, 181, 185, 180, 187, 189, 190, 183, 184; L. N. Fouts, Brownstown, 181, 183, 188, 189, 180, 184, 185, 186; John E. Higdon, Indianapolis, 184, 183, 190, 185.

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## MISCELLANY.

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### THE CHILD-STUDY CONGRESS, INDIANA UNIVERSITY.

It has long been the custom at Indiana University to enrich the work of some one department every year by a course of lectures supplied from outside sources. Through the efforts of Dr. W. L. Bryan the usual course of lectures was supplanted by a general convention for child-study, and in which the leading thinkers of this great movement were invited to take part. Only two speakers on the excellent programme failed to participate, Prof. G. T. W. Patrick, University of Iowa, and Dr. J. H. Kellogg, Battle Creek, Mich. Many of the most prominent superintendents and department teachers in the State were present. The lectures of Pres. G. Stanley Hall were largely attended by both students and citizens, and the deep interest manifested was indicative of the growing influence of child-study.

WEDNESDAY, MAY 5, 8:00 P. M.—The congress opened with prayer by the Rev. M. G. Allison. Then Dr. Bryan introduced the mayor of Bloomington, who, in a spirited speech, accorded to all visitors the free hospitality of the Stone City of Indiana. Pres. Joseph Swain followed in a fitting address of welcome in behalf of the faculty of the University. Pres. Swain impressed the fact that Indiana University was widely known as the home of science and stood with open doors to all searchers for truth. The gavel was now turned over to Supt. John Carr. of Anderson, who presided for the rest of the evening. After a few cordial words of greeting, Supt. Carr presented Prof. Howard Sandison, of the State Normal School.

As secretary of the Indiana Society for Child-Study, Prof. Sandison reported that so far the members had come mostly from the superintendents, principals and department teachers of the state, and stated that in his talk he would endeavor to meet the hundred inquiries gleaned from letters from grade and country teachers. The lines of interest manifested by the grade and country teachers may be seen in these five representative questions: What good would child-study do me? Is it not merely a new fad? Is it really a new movement at all? Is not the movement bearing too strongly upon the mere examination of the physical child? What can we do with our limited knowledge to help on with this work where we are already overcrowded?

Prof. Sandison showed that participation in child-study would not make school work a sinecure, or interfere with the study of the general principles of mind and method, but that such extensive observation mean new life to educational thought. All crusades and reforms have had a limited idea as their center. Child-study emphasizes the study of both the specific and general aspects of child life. Since the time of Solomon the child has been known by his doings, and the interests that cluster around the center of the child-study movement are the most abiding in human history. By a more extended study of the child the teachers of the state may be made to feel that, (1) the child is worthy of scientific study; (2) may apply the mature results of research bearing upon the teaching process; (3) may inquire into the contents of the children's minds in their own room better than an expert, and (4) test the peculiar interests of the individual child as no one else can.

Prof. C. H. Thurber, University of Chicago, next read a paper announcing patience as the first precept of child-study, and urging the need of more workers in the field. The main thesis of Prof. Thurber's paper was an impressive plea for the study of the child as a member of society, and



showed careful research in the different country and city districts in the state of New York. Prof. Thurber believes that this kind of work would do much to harmonize the views of parents and teachers. He commends mothers' meetings.

THURSDAY, MAY 6, 9:00 A. M.—The Society held a meeting with Prof. Sandison as chairman. It was decided by motion that Prof. Sandison, as secretary of the Society, send out circulars seeking information, and that from the material received he compile a bibliography upon the subject, to be distributed to the members. The fee of membership was fixed at fifty cents, this sum entitling all holders of receipts to the literature sent out by the North American Conference of Child-Study, so recently organized at Chicago, and of which Dr. W. L. Bryan is president.

Supt. W. A. Millis, of Attica, read a paper on the topic, "What may be Done in the Common Schools in the way of Child-Study?" Supt. Millis held that the average teacher was not prepared to do scientific child-study; that this work should be left to experts; that normal schools should be made experiment stations; that the adjustment of results obtained from research must be made by the teacher in charge, and that the mothers' meetings mean the closer articulation of parents and school.

Supt. W. H. Sanders, of Rensselaer, urged in a brief but impressive talk that teachers consider the child of flesh and blood, of their every day acquaintance and that they cease the fetish worship of mental fabrication, and that teachers have due regard for the dangers of overpressure in school work.

Miss Myrtle S. Smyser, of Indianapolis, offered an entertaining plea for the teacher as mediator between the child and the different educational theories. The teacher must feel the helpful influence of this work in her own life, she must be led on by love and sympathy for the child.

Superintendent Moore spoke of the fact that teachers must be induced to make conscious and purposeful observations.

Mrs. Sarah Tarney-Campbell, of Anderson, dwelt upon the study of children's interests and the subjects of fatigue and overpressure in a manner that won hearty applause from the audience.

Col. F. W. Parker made some stirring remarks which were well received.

THURSDAY, MAY 6, 2:00 P. M.—Col. F. W. Parker lectured to a large and intensely interested audience upon the subject "Children's Interests." Col. Parker treated his theme in a scholarly manner and spoke with eloquence, and the power of conviction as he defended the plea of usefulness as the end of education instead of knowledge. To Col. Parker the ideal school is the ideal community.

THURSDAY, MAY 6, 8:00 P. M.—President Hall delivered a lecture upon "Adolescence" to a crowded auditorium. President Hall's treatment of adolescence covered the entire grounds of modern research upon this subject and was in a style at once literary and convincing.

After Dr. Hall's lecture, Prof. W. O. Krohn, University of Illinois, was introduced by Col. Parker and won loud applause by prefacing his talk with the statement—"What shall he do who cometh after the king?" Professor Krohn made a forcible plea for a pedagogy scientifically adjusted to the needs of the individual child.

FRIDAY, MAY 7.—Pres. G. S. Hall lectured at 10 o'clock upon "The Child and Nature," and at 2 o'clock P. M. upon "The Physical Basis of Psychic Activity." After the morning lecture, the Congress was addressed by Dr. C. C. Van Liew. The thoughts of Dr. Van Liew upon "Imitation and Suggestibility of Environment" were well received.

Friday evening the graduates of the State Normal School, now students in I. U., gave a banquet at the Gentry Hotel with Prof. Howard Sandison as guest of honor. Forty-seven covers were spread and Mr. T. E. Mitchell, acted as toast master.

On Friday, both the work of the university and the city schools was suspended in order that professors and teachers might attend the lecture of President Hall.

D. T. P.

THE ELKHART SUMMER SCHOOL will open June 8, and continue eight weeks.

CAYUGA graduates one from its high school this year. O. B. Zell has charge.

DELPHI sends out twelve from its high school this year. F. C. Whitcomb is principal.

COLUMBUS enumerates this year 2,119 children of school age, a falling off of seventy-two from last year.

HARTFORD CITY.—Superintendent Frank M. Beard sends out from his high school this year five girls and two boys.

THE CORYDON high school sends out one of the neatest programs we have seen. Jesse W. Riddle is superintendent.

FRANKFORT graduated from its high school this year thirty-one. B. F. Moore, superintendent and D. R. Major, principal.

WASHINGTON High School class for '97 numbers twenty-three. W. F. Axtell is superintendent and Hamlet Allen is principal.

ANDERSON graduated thirty-five students from its high school, May 28. J. B. Percy is principal and J. W. Carr is superintendent.

BRAZIL high school, T. N. James, principal and J. C. Gregg, superintendent, graduated five from its Latin section and fifteen from its English section.

ERRATA—THE JOURNAL should have given as secretary of the penmanship section of the N. I. T. A., J. P. Jones, of La Porte, instead of Mr. Holmes.

THE DECATUR SUMMER NORMAL, opened at Greensburg, May 31, with W. P. Shannon, G. L. Roberts, C. T. Powner and J. H. Bobbitt as instructors.

MUNCIE high school sent out this year twenty-five girls and nine boys. Where are the rest of the boys? Wm. Masters, principal, W. R. Snyder, superintendent.

THE AMERICAN BOOK COMPANY will be glad to send a classified price list of all its books for the asking. Its descriptive list of supplementary reading is very attractive.

ALBANY held its first annual commencement May 12, and graduated three. Superintendent Geeting was present and made an address. Edwin F. Dyer is superintendent.

NEW CASTLE.—Mrs. C. N. Mikels is principal of the high school and has four assistants. The class of '97 numbers ten. The printed program is artistic. J. C. Weir is superintendent.

SALT LAKE CITY is making a hard fight to get the National Association for 1898. Salt Lake has many attractions and would be a good place to meet. We are informed that its facilities are ample.

PORTLAND, Muncie, Decatur, Winchester and Bluffton, recently indulged in an oratorical contest. Portland got first honors, but Muncie took first place in declamation and second in oratory.

NOBLE COUNTY.—The common schools will hold their first annual commencement June 2. Twelve of the thirteen townships have graduates, their being sixty-eight in all. E. L. Adair is superintendent.

MIDDLETOWN employs nine teachers with H. N. Coffman as superintendent. A recent visitor who is a good judge said: "Taking these schools from top to bottom, in all the classes of work, I doubt if they have their equal in the State."

THE committee of the Southern Indiana Teachers' Association has fixed the date of the next meeting, which is to be held at Terre Haute, for March 24-5-6, 1898. Superintendent W. H. Wiley is chairman of the committee and is starting in good time.

FORTVILLE.—Schools closed here with much interest manifested. Each of the high school classes prepared and gave their themes to large audiences. There were nine graduates. Superintendent Jay says he has never had a more prosperous school year.

THE NORTHERN INDIANA NORMAL has been making some decided additions to its laboratory facilities including latest and best appliances. It has also added to its library. Dr. J. H. Martin, of Moore's Hill, recently made an address before the students which is reported as "admirable."

PORTER COUNTY.—Superintendent Hughart has issued a two-column, twelve page paper, which is devoted to the interests of the Porter county schools. It contains much matter that will certainly be both profitable and interesting to his patrons, which means all the people in the county.

CHARLESTOWN.—The schools here closed pleasantly. Dr. Burroughs, of Wabash College, delivered the baccalaureate sermon, and W. H. Bartholomew, principal of the Louisville Female High School, made the class address. On May 5, the school went on an excursion to the Cincinnati zoological gardens.

NEW ALBANY has done it again—that is it has given a May-day entertainment by the public schools, which brought a revenue of nearly \$600, which means an addition to the school libraries of about 600 good books. Superintendent Hershman allows such things to happen nearly every year. Just like him!

THE INDIANA HIGH SCHOOL ORATORICAL ASSOCIATION held its first contest at Indianapolis, May 21. Portland, Richmond, Madison, Plainfield and Indianapolis were represented. Forest Cartwright, of Portland, with an oration on Wendell Phillips took the first prize, and Juliette Hollingsworth, Richmond, on "The Sick Man of Europe" took the second. The meeting was large and enthusiastic.

"BATTLEFIELDS IN TIME OF PEACE," is the title of a lecture delivered at Vincennes, April 18, under the auspices of Vincennes University, by Geo. R. Wilson, superintendent of Dubois county. The lecture has been printed in pamphlet form and the writer can testify that it is well worth reading. The same author gave in the same place a very instructive lecture (also in print) on Titles, Deeds and Surveys.

PURDUE UNIVERSITY.—The annual catalogue for 1896-7 with announcements for 1897-8 is on our table. It contains a brief history of the school, describes its material equipment, gives courses of study, conditions of admission, catalogue of students, etc., so that a complete and excellent showing of the university is made. It makes a book of nearly 100 pages. Any one interested can get this catalogue by addressing the president, J. H. Smart at Lafayette, Ind.

DEKALB COUNTY.—The Board of Education at its May meeting listened to Superintendent C. M. Merica's report which was in part a review of the work done in the schools in his *fourteen years* of service. The total number of high school graduates for the county this year is twenty-eight, and the number of common school graduates is one hundred sixty. The date fixed for the county institute is Aug. 23-7. Superintendent Merica is not a candidate for re-election and so will close his long and honorable term of service when his successor has qualified.

KOKOMO.—The writer recently paid a short visit to the high school and found it as he has often found it before—one of the best in the State. It has enrolled this year about two hundred, and will graduate twenty-five.

J. Z. A. McCanghan is principal. He also visited the fifth ward building, of which O. L. Woolley is principal, and witnessed some good teaching. Mr. Woolley himself is a good principal and is certainly a superior teacher. Superintendent Woody has reason to be proud of his schools if the schools visited are fair samples of the rest.

THE ART SECTION was omitted in the general report of the Elkhart meeting printed last month for the reason that no report was sent in and not that the JOURNAL intended to slight this section. The meeting was considered a good one. Miss A. E. Hill, of South Bend had arranged the program and was chairman of the meeting. Jesse H. Brown gave a talk on "Picture Drawing" which was greatly enjoyed. Miss Ingraham, of Tipton, read an interesting paper on "Illustrative Drawing." She exhibited drawing showing what could be done. Those who were present felt well paid and decided to hold another meeting next year. Miss Ingraham was elected president.

THE NATIONAL HERBERT SOCIETY is about to issue its third Year-Book which will be sent out to its members early in June. Old members are requested to send in the yearly dues at once. Single membership \$1.00 per year. In clubs, 75 cts. each. The *leaders* of local clubs are requested to collect and send in the fees. The Society now has 675 members, including 32 local clubs in different parts of the country. Besides the supplementary papers on "Training for Citizenship," the next Year-Book will contain four important papers on "Moral Education in Schools," as follows: by Dr. John Dewey, the University of Chicago; President Charles De Garmo, Swarthmore College; Dr. Wm. T. Harris, Commissioner of Education, Washington, D. C.; Principal John Adams, Teachers' Training College, Aberdeen, Scotland. Address Charles A. McMurry, Secretary University of Chicago, Chicago, Ill.

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### PERSONAL.

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SUPERINTENDENT J. W. JAY and all his teachers were re-elected at Fortville.

JAMES B. ANGELL, president of the University of Michigan, has been appointed minister plenipotentiary to Turkey.

STATE SUPERINTENDENT GREETING has been "on the wing" lately visiting high school commencements and making addresses.

CHAS. M. MCDANIELS has been re-elected superintendent of the Madison schools. This is proof that his first year's work was satisfactory.

A. W. MACY, a native Hoosier and a graduate of Earlham College, is now western agent for Macmillan & Co., with headquarters at Chicago.

SAMUEL WERTZ has been unanimously elected principal of the Columbus high school for another year. Mr. Wertz has satisfactorily filled this place for many years.

RICHARD PARK, superintendent of Sullivan county, recently had an article on "Educational Factors" in the *Educational News* of Philadelphia. The article is a good one.

J. H. TOMLIN has been elected for a fourth year as superintendent of the Shelbyville schools. A local paper, opposed to him in politics, speaks of him and his work in terms of unqualified commendation.

EDWARD TAYLOR, for many years superintendent of the Vincennes schools, but now superintendent of the schools at Bowling Green, Ky., has consented to take charge of the Kentucky school exhibit at the Tennessee Centennial at Nashville.

PAUL MONROE, of Franklin, formerly principal of the high school at Martinsville, but for the past two years fellow in sociology in Chicago University, has been elected to a position in the sociological department of Columbia University. Mr. Monroe graduated from Franklin College in 1891.

Prof. Samuel E. Harwood, for many years a Hoosier, but now a member of the faculty in the Southern Illinois State Normal, at Carbondale, reports that his work is pleasant and that the school is larger than usual. Prof. Harwood generally comes back to Indiana to do some institute work, and he is always welcome.

PROF. R. J. ALEY, of Indiana University, who has been away on a leave of absence for the past year, taking a post graduate course at the University of Pennsylvania, has successfully passed his examination and will receive the degree Ph. D. June 9. He will then return to Indiana and be ready for his share of the summer institute work.

MISS MARY E. NICHOLSON, of Indianapolis, is chairman of a committee to make a report to the next National Council on "The Aesthetic Element in Education." The other members of this committee are W. T. Harris and John Dewey. Miss Nicholson is one of the few women who have ever been members of the Council and she is at present the only Indiana member.

# Delicious Drink

## HOSFORD'S AOID PHOSPHATE

with water and sugar only, makes a delicious, healthful and invigorating drink. Allays the thirst, aids digestion, and relieves the lassitude so common in midsummer.

Dr. M. H. Henry, of New York, says: "When completely tired out by prolonged wakefulness and overwork, it is of the greatest value to me. As a beverage it possesses charms beyond anything I know of in the form of medicine."

Descriptive pamphlet free. Rumford Chemical Works, Providence, R. I. Beware of Substitutes and Imitations. 6-tf.

## BUSINESS NOTICES.

A COURSE at the Indianapolis Business University opens the avenue to immediate and permanent employment. Students enter any time.

THOMAS VICKERS, superintendent at Portsmouth, O., says: "The Barbour Tablet Ink is the best shool ink I ever used." See ad on another page.

HAIR ON LADIES' FACES is very annoying. It is permanently removed by G. Varin, 25½ West Washington St., Indianapolis. Write him for information. 5-2t.

THE SUMMER TERM OF THE ELKHART INSTITUTE opens June 8; closes July 30. Eight weeks. Seven instructors. For particulars address J. S. Hartzler, secretary, Elkhart, Ind. 5-1t

J. M. DUNGAN, president of the Indianapolis College of Music, and for fifteen years teacher of music in public schools, will conduct vocal music in teachers' institutes during July, August and September. For particulars, address him, Indianapolis, Ind. 6-1?

SCHOOL BOARDS contemplating changes can learn the address of the best Western and Eastern teachers, willing to change places, by addressing Orville Brewer, manager of the Teachers' Co-operative Association, 101 Auditorium Bldg., Chicago. We can assure all who write of confidence and honorable treatment. 2-tf.

LAKE ERIE & WESTERN R. R., all rail Niagara Falls excursion. Wait for the old reliable Lake Erie & Western personally conducted Niagara Falls excursion, Thursday, Aug. 5, 1897. Also Sandusky, Put-In-Bay, Cleveland and Buffalo, with side trips to Lewiston, Toronto, Thousand Islands, etc. For tickets, rate, time and pamphlet containing general information, call on any ticket agent of the above route, or address, C. F. DALY, General Passenger Agent, Indianapolis, Indiana.

Is THE Tri-State Normal of Angola, thorough? Read the following letter:

KENDALLVILLE, IND., May 20, 1897.

Dear Prof. Sniff:—I am glad to inform you that this morning I received a life State license from the State Board of Education. The list of the successful ones as published in the Indianapolis papers showed *nine*, two of them being from the class of 1890, of the Tri-State Normal College, Prof. J. W. Wyandt and myself. Respectfully,

V. W. KIMMEL.

We had two out of nine two years ago. See our ad on last page.

L. M. SNIFF, Pres., Angola, Ind.

### CHLORO-NAPHTHOLEUM,

The great disinfectant for schools. Meets all requirements of State Board of Health. Reduces the sickness among children. Non-poisonous and non-explosive. Costs 1½ cents per gallon, diluted. Adopted by New York, Chicago, Los Angeles, Cincinnati and Indianapolis schools.

WEST DISINFECTING Co., 31 West Market St., Indianapolis.

Reference: INDIANA SCHOOL JOURNAL, P. J. O'Meara, purchasing agent Indianapolis schools, Mr. Makepeace, Indianapolis. 3-tf.

## THE WINONA SUMMER SCHOOL

JOHN M. COULTER, Ph. D., L. L. D.,

Of the University of Chicago, PRINCIPAL.

The Third Annual Session of the Winona Summer School will extend through Four Weeks, beginning July 19th.

Instruction is grouped under the following heads: (1) College Department; (2) Department of Methods; (3) Department of Music; (4) Department of Art; (5) Department of Physical Culture.

In all of these departments teachers of large reputation have been secured, and every subject will be presented in the most approved method.

The attention of teachers is especially directed to the work in Languages, Mathematics, and Sciences, conducted by the College Department; and also to the various grades of work, from Kindergarten to High School, presented by the Department of Methods.

The great attraction of Eagle Lake (near Warsaw) as a summer resort, the numerous important conventions that are to meet there during the season, the lectures and concerts of the Assembly program, all combine to supplement the work of the school in a most profitable way.

For circulars containing full information, address  
5-3t SOL. C. DICKEY, Sec'y and General Manager, Eagle Lake, Indiana.

### TEACHERS WANTED

In every County and Township in the Northern and Central Indiana General Agency of the Mutual Life Insurance Company, of New York, to solicit life insurance during the summer vacation. Liberal contract. You can make as much or more than your regular salary.

Assets, Dec. 31, 1896.....	\$234,744,148.42
Reserve and other liabilities.....	205,010,633.72
Surplus.....	29,733,514.70

MUTUAL LIFE INSURANCE CO. OF NEW YORK.

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The Oldest, Largest, Best.

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ROBERT N. MERRITT & CO., Indianapolis.

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## THE STUDY OF HISTORY.

J. M. CALLAHAN.

Historical study has a general educational value. It widens the horizon of thought and feeling and develops in the student a many-sided interest. It lifts individuals above their own narrow interests and leads them to see that "No man liveth to himself." It enables us better to understand ourselves as the product of historic forces. It is of great utility in interpreting contemporaneous phenomena, and in guiding the further development of the social system along practical lines.

History has more value than the mere interest which Goethe saw in it. It is not a brilliant writing of the follies of kings for the mere pleasure of the present. It is not mere gossip. The graveyard of the past is not disturbed simply for the sources of amusement that may be dragged from its tombs. Neither should the past be studied for mere information. A dreary mass of mere facts are of no more use than dead men's bones unless life is breathed into them. Nor is history to be studied merely for the moral lessons which may be squeezed out of it. The purpose of study is not to set up sentiment but to discover truth.

One of the chief purposes of historical study is to enable us to understand, approximately, how human institutions and life came to be what they are—how concords and harmonies have triumphed in spite of the strifes of "blood and iron" in the development of ideas of national unity. The state is the product of history. It

has been gradual in its realization. Institutions do not grow in a day. What we are to-day is due in great part to what has been saved from the life of many people and organizations. Many silent springs have fed the great stream of progress. People of all occupations and social communities, battling with and assisted by nature, have contributed to the stream of surging events which bears with it the freight of the ages. No single "chosen" people or section is the source of all the factors of our present civilization. In accounting for American history, we must consider not only the work of the Puritan fathers, but also that of the southern planter and the plain western settlers whom the "salt-water" historians have neglected; and back of these are the ideas contributed by Teuton, Roman, Greek and Jew.

The footsteps of the past are near to our lives. The generations that pass away leave their secrets to the living. They leave their traces in the living institutions which serve the common life of all. Nations fall, but life goes on and ideas grow. The silent toil of one generation becomes the aptitude of the next. Humanity educates itself by an ever widening circle of thought, and with each generation lies gathered the wisdom of the ages.

The past is not worthless. It has made us act and live together, avoiding a Babel of customs. We profit by its study. It not only enables us to see whether we are moving in the direction of more complete life; but by enabling us to understand the institutions upon which we are building, it better prepares us to preserve or change them in the line of progress. In this way, the past experience of humanity becomes the guide to future action, both to teach and to warn. It trains us to think with our feet on the ground and to avoid spinning things out of our heads. It makes us conservatively progressive.

History is the lesson book of politics, but it must not lead to the frigid reproduction of lifeless forms long since outgrown. We should not appeal to the authority of the past merely for precedents for the adoption of the present age. This would mean political stagnation. We are not to adhere to the *letter* of the past, but are to use its experience in guiding the spirit of the present, and in shaping ideals for the future. History should serve to direct the thought of the age in selecting that which will best advance the interests of the new times, expediently building upon foundations already laid.



The general diffusion of historical knowledge is especially important in countries like the United States whose safety lies in an intelligent public sentiment. It serves to decrease the general lack of correct information and judgment that is sometimes reflected in the public speeches of those who, in order to obtain leadership or prominence, endeavor to play upon prejudices and passions to carry their point. It serves to decrease the influence of men untrained in political science who seek to make the manipulation of primaries and caucuses the principal qualification for government positions. It gives intelligent guidance for the fundamental good sense of the great people in selecting leaders who keep in touch with the political and social problems of the day. Finally, it tends to create that healthy public interest which is so important to the success of democratic government. To sit still and let others control means deterioration of fiber. That community loses its usefulness which keeps its nose to the grindstone of money getting and leaves everything else to the ward heelers and to the sheriff. That scholar does not serve his community best who keeps himself cloistered from the world. The duty that each man owes to society is not less than the duty which society owes him. At Athens, the man who took no interest in public affairs was regarded "not as a harmless but as a useless character."

For most students, the scope of historical study in school must necessarily be limited and plans of courses must vary according to circumstances. In general, it is better for such students to survey the whole field than to dig deep in any one place. It is sometimes better to plow wide and get acquainted with the ground than to burrow deep and lose sight of the surroundings. Pupils must get a proper background of universal history, in order to understand the struggles and harmonies which underlie our present civilization. They can at least get the landmarks of progress in the vast panorama of the past—with its conquests, social problems, institutional machinery and development of moral ideas. The study of the peoples of earlier times and different countries gives a breadth of view which can not come from the study of local affairs in which the student may possibly be more directly interested.

There has been much difference of opinion as to where the study of history should begin. Some say that it should be begun

with the living present—where we are ; that present phenomena are the living contemporaries which must introduce us to the more distant phenomena ; that local history should be studied first. Others hold that the student should first get a perspective view of history in the order in which evolved. This article can not discuss the relative merits of the two views. The purpose in each case is directly or indirectly connected with present interests. We need to know the past in order to understand the present. But we must also use the present in interpreting the past. Our knowledge of life, human nature, and existing societies is based upon both present experiences and a study of the past. For short courses in history the general view of earlier times may be treated very briefly, in order to give more attention to the recent evolutionary steps which explain present institutions in their practical working. In all cases, study should not be isolated from present life and interests. Dry facts are dead unless they are related to the living.

History is not a mere set of formulas to be swallowed without examination, and mastication. It is not all in the books, waiting to be recited by the page. It is to be read in, and illustrated by, the facts and events which lie in the world of nature around us. Books alone are lifeless. They do not present a warm picture. To give life and reality to study, the reading of the narrow text should be supplemented by illustrative materials and by the direction of a living teacher who is able to explain and to amplify the narrative and who can lead the student to the sources from which the narrative has been prepared. The knowledge of people and natural conditions should not be neglected. Excursions to places of historic interest may be made. Students should be encouraged to exercise their thinking by making applications of the knowledge which they acquire. A broad view of the relations and the significance of events rather than the memorizing of a mass of details should be sought. Note-taking with a definite purpose in view is more important than the laborious drudgery of mastering a certain amount of prescribed knowledge in order to pass examinations. Many details of wars and personal peculiarities of kings may be omitted, at least. Study should lead to a development of judgment rather than to a race-track of intellectual performances. Judgment of the student is based upon the study of a mass of details, but an attempt to remember a

waste-basket of details would lead to nightmares, confusion and despair. Examinations should test the judgment rather than the memory, and the student should have practice in arraying knowledge rather than in developing the brute force of the mind.

Johns Hopkins University.

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### EXPERT TEACHING.

CHAS. A. McMURRY.

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In the former article on this subject attention was called to the possibility of the common school teacher becoming an expert in spite of his variety of studies.

In our day there are many influences at work looking toward the development of expert teaching. The universities in the last twenty years have tended strongly toward specialization of studies both for the professional body and for the students. In nearly all leading lines of study the universities are yearly turning out specialists, as in chemistry, engineering, Greek, mathematics, literature, biology, &c. We do not expect university specialists to become teachers in ungraded schools but a certain kind of definite specialization is needed in ungraded schools as much as anywhere. The normal schools, whose members and importance are developing with surprising rapidity are doing all they can to train teachers to a special mastery of the common studies and of the process of rational teaching so that they will have distinct marks of professional skill.

But it is an interesting question for those now in the profession, who can not go back into training and normal schools, how far they may acquire that fullness of knowledge, that enthusiasm in rich acquirements and that expert power of manipulation which mark the specialist. Certainly the children in our rural and village schools need this kind of teaching as much as any children.

The conditions under which our common school teachers have labored have been somewhat unfavorable to the acquirement of expert knowledge and skill. But not altogether so. No one is so free in one profession, so far as external control is concerned, as the teachers in ungraded schools. The main difficulty has been the aim set up by teachers and examiners as to the kind

and quantity of knowledge required of children on completing the school studies. The brief, summarized outline of important facts and principles has been the controlling idea in our text books and also in the minds of teachers. This gives a certain systematic form and comprehensiveness to text-books that recommend them to formal and routine teachers. But such text-books and such teaching have none of the enthusiasm and none of the fullness of detailed knowledge which mark the specialist.

The amount of time spent by pupils and teachers in memorizing, drilling upon and reviewing these outline schemes of geography, history and grammar is sufficient for a really full and expert treatment of a few leading topics. It is dangerous, especially for young teachers, to be over-critical of text-books. Instead of throwing aside our text-books it would be better to hold to the best that is in them and then add any clearly proved advantages. With this warning we may learn to sift out from our texts the essential topics and apply to them a method of expert teaching.

One of the most important events treated in the histories is Burgoyne's Invasion. A full month in seventh grade could well be spent in the study of this topic as treated in "Drake's Burgoyne's Invasion" (Lee & Shepard). It would open the eyes of the children to a whole series of thrilling events. It is impossible that the story of this expedition should be told in any suitable way in two or three pages of condensed history any more than one of Scott's novels or a play of Shakespeare could be reduced or boiled down to like dimensions. You can indeed boil it down but the product is an insipid concoction from which all freshness and lively interest have been squeezed out. It would be difficult to find a more instructive, important and interesting piece of history, if worked out into a graphic description of noted characters, such as Burgoyne, Schuyler, Arnold, Gates, Frazer and Stark or of strategies and battles along the Mohawk and at Bennington, or of geographical advantages and difficulties met by both armies. There is a strong dramatic interest in this brilliant army marching down from the north, at first sweeping everything before it, till the tide is turned and difficulties and disasters gradually hem it in and cut off retreat. But there is a rising enthusiasm as we watch the efforts of the patriots, the sturdy spirit of the New Yorkers and Green Mountain boys as they rally

to resist Indians and invaders. The final outcome also had a telling influence upon the Revolutionary struggle. For the sake of the life, enthusiasm and insight into a great series of events a full story of this kind is worth vastly more than the average text-book routine. It gives the teacher also a chance to acquire a specialized knowledge and interest in such a topic.

We see in this illustration what was noticed in the illustration on the Rhine River in Geography that the amount of time required of the teacher in full preparation on a single topic like this (if the suitable book is at her disposal) is but little greater than what is usually required in routine history lessons.

When teachers once see the advantage of selecting a few great topics for full study over the multitude of topics in outline it will be possible for the teacher in ungraded schools to make an approach to expert work. But this can only be done when the suitable books are put within the reach of teachers.

This principle applies also to that new subject, nature study, which is growing in importance in so many schools. The field of nature is so vast and varied that a selection of a few important topics (type studies of plants and animals) becomes indispensable unless we are to scatter wildly over a boundless area and reach no satisfactory results.

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### THE HALF-DAY SYSTEM.

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In consequence of the recent awakening of educators to the real object of study—the real problem to be solved—“How the child’s mind works in conscious effort to acquire knowledge,” I am daily—yes hourly oppressed by the thought that *all* is not well with the child, nor with the teacher. Possibly the *parent* feels that *all is* well if the child is making high grades, but the teacher over whom hangs the eternal problem of life *knows* that *all* is not well.

Here is a bright little girl in the fifth grade representing a family of more than ordinary intelligence. She is not yet ten years old, but has mastered all the school work along the line, is a good reader, conscientious and impressionable, yet scarcely more than an infant.

*She completes* her work, while the sluggard of the room, or the mischievous boy whose mathematical calculations have never

gone beyond the concrete, being entirely confined to the number of marbles, beechnuts, or buckeyes in his pockets, apple cores in his desk, or paper wads which have been successfully fired at the workers, is absent-mindedly pulling himself up for the task of *beginning* the work which he was never *known* to *finish*.

Pupil No. I begins to look about for employment ; asks her teacher for work ; who probably refers her to the afternoon lessons, reminds her of the importance of "Taking time by the forelock," and so on, when the child proudly displays all the lessons of the entire day neatly done if written work, and, knowing her ability and honesty are not to be questioned, as a last resort the teacher furnishes her something to read. Then trouble begins. Others who have finished the work demand reading matter, and the supply will not meet the demand. Still worse, careless, self-confident pupils will run through the lessons and clamor for books. The teacher at that hour can not take time to see that their work *is* or *is not* correct, but let her withhold the books—to her sorrow, she will find she has a co-worker in the room—the same one that invaded the Garden of Eden. I am aware that the claim will be made that the *true* teacher full of resource and spiritual life, will obviate all this, by one of those pleasant deviations from the routine work which both delight and instruct ; but the teacher has tried this time and again, only to find her slow pupils farther behind with the regular work, and the gap she was aiming to bridge still wider.

Now, the solution which presents itself to me is that the teacher very carefully examines her class during the morning session on all the work that was assigned yesterday ; and equally as carefully, assigns the work for to-morrow, throwing needful light on dark points ; those whose work reach a satisfactory degree of excellence will not return for the afternoon, their work being prepared at home, leaving plenty of time for general reading, music and play, instead of being confined in an overheated, overcrowded, dusty room pervaded with bad odors. Under this system, the better class of pupils, whose parents are *with* the teacher in her great work of developing body, mind and spirit, will not attend the afternoon session ; thus leaving the teacher with only those who need her help in the awakening processes. Of forty pupils, perhaps not over twenty will be present, which can be well separated, the air will be purer, the room compara-

tively quiet, and all conditions improved. The teacher can now pass from desk to desk, patiently suggesting, explaining, and encouraging those who so much need her help, because of the great darkness that surrounds them at home. And during the examination, in order to ascertain how much thought each has been able to crystallize from the subject matter of the lesson, the room is free from the impatient and almost merciless criticism of the ready thinker and fluent talker. All grade teachers know how next to impossible is the task of suppressing these and compelling them to patiently listen to the expression of ill-formed thought clothed in awkward language. Indeed, they will not listen; just as soon as they find they will not be permitted to cover themselves with triumph by a brilliant recitation, they begin to seek amusement at the expense of the order of the room.

This plea is made first, for the sake of the refined, intellectual pupil, whose sensitive body and soul often really suffer, the former because of needless confinement, and the latter because of continued contact with inferior mentality and spirituality.

Again, it is made for the sake of the crude and obtuse-minded pupil who must be brought into closer sympathy with his teacher, unabashed by the presence of those whom he intuitively knows are weighing and finding him wanting.

And surely to the teacher is due some consideration, for while it may not lighten her work, it will certainly give her a better opportunity for personal influence over that class of children, for whom every teacher feels that the public school is the one and only chance.

UTOPIA.

Greensburg, Ind.

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HAS the last year brought a gain or loss to my professional standing? Have I stood still? Can we *ever* stand still? As to my personal self, has the standard of high living been lowered? Do the rosy ambitions to do something and be something better than ever before, seem farther away than in my last vacation? Is all life more vital, human need more urgent, and the desire to help, stronger than a year ago? Have I gained in breadth and clearness of vision as a woman as well as a teacher? What have I read, seen or heard, last year that has strengthened and built up personal character? Has my æsthetic nature been fed or starved? Have I shut myself within myself and so forgotten my personal duty to radiate a loving, sympathetic nature for the softening and benefiting of humanity?

## ENFORCEMENT OF THE COMPULSORY EDUCATION LAW.

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[A paper read before the Indianapolis Education Society, by John H. Holliday, Chairman of the Executive Committee of the Indianapolis Charity Organization.]

The actual knowledge gained in education is the smaller part of its value. Let a graduate of a first-class university who has mastered his course as thoroughly as a student can, pile his books one upon another and seriously take stock of his possessions, and he will find that the sum is not great. He has a smattering of this and a smattering of that, possibly a considerable knowledge of one or two subjects, but in the main he will feel that he has only begun to learn. Let him some years after when he has won a worthy place in the pursuit he has chosen—except it be in one of a few specialties—take account of his furnishings and he will learn that his success was due in small measure to what he knew when he began. He will find it due to the qualities developed and the power acquired by his education; the training of his faculties day by day; the formation and cultivation of habits of thought and industry. The steady pursuit of an object engrossing his attention and demanding all his ability, produces a readiness of mind and hand, a concentration of power along a given line, which enables him to work intelligently and effectively on whatever he undertakes. His education qualifies him to do things, and he has such grasp of mind and breadth of comprehension that he is able to give good account of himself even when put upon wholly unfamiliar ground. He has been trained in habits that make him valuable to society in greater or lesser degree.

This is a truism and the only excuse I have for repeating it is that I think we who have had the benefit of training from infancy and to whom it came as naturally as the air, find it difficult to conceive the condition of thousands of our fellow citizens who have grown up and are now growing up without any. We do not realize how devoid they are of the most ordinary habits that are essential to the existence of society. We regard education more in the light of an acquisition of information, than in the inculcation of these habits which we presume come naturally to every one as they came to us. We do not realize that many



children will never gain an idea of order, of respect for authority, of obedience, of cleanliness, of courtesy, of self-control, of decency even, unless they receive it in the only place where they can be educated—the public school. They get no such training in the home or on the streets. If they do not get it in the schools, they never get it.

I believe that a vast majority of intelligent people utterly fail to realize the existence of a large class that live as the beasts that perish. They know there are poor and degraded classes from which the army of paupers and criminals that make such an enormous charge upon the community, is recruited, but they do not understand that a frightfully large number of children are coming up each year without training or restraint of any sort. "Why, there are the schools," they say. "See how much we spend on education; how great the school fund is; how many are being educated. Everybody in this glorious country has the opportunity of getting a primary education at least. If any one neglects it, he is incorrigible." And if shown that many do fail they ascribe it to total depravity or to heredity, and dismiss the whole matter as one beyond remedy, governed by unknown laws that men are powerless to affect.

It is a characteristic of the American people to establish a system or adopt a law and expect it to carry out its purpose unassisted. The same reasoning would expect an engine to work without steam. Given, therefore, a school system open to all and innumerable good people cannot believe that its benefits are not received equally by the whole community. They forget that powerful factor, human nature, with its ability to thwart the best of schemes so easily, and which must always be taken into account in dealing with mankind.

I have said there is a large class that live as the beasts that perish. We are not now concerned with the various causes of its origin. That it exists to an appalling extent is easily demonstrable. There are parents who have no more conception of the obligations of fatherhood and motherhood, than a wild-cat has. Perhaps this is a slander on the wild-cat, for some men and women lack even the animal affection that cares for helplessness. They have no thought for themselves beyond keeping the body comfortable and providing for the indulgence of appetite. They have no thought for their children beyond this, and even when

there is a species of affection for them, it takes no form of improving their condition. They are concerned only in getting food and warmth. When the children are too little to work or beg, they are left to do as they please. They have no government unless angry blows be called such, and when they get big enough to emancipate themselves from this, they do entirely as they please. The only fetter is the law and the restraint in that case is only one of blind fear. If they can break it without detection, the act is a source of pride and an evidence of shrewdness. The children are not sent to school. The system does not reach them. Why should it? "What is the use?" say the parents, "we never went to school and we have got along. What is good enough for us is good enough for our children." The advantages that we see in education these people do not comprehend. Our point of view is as inaccessible to them as theirs is to us. The idea that it is a duty to provide for the future and to better the condition of the children, and to work steadily to do this, is unknown to them and would be abhorrent if it were known. To work as little as possible and as lightly as possible, is their notion. Why slave and lose a good time for some vague expectation? They have no forethought, that quality which makes the forehanded and pushes the world forward. They take life as it comes. Its events are beyond their control. The only thing is to make it as easy as possible and easiness means laziness, shiftlessness and poverty, and the three as a heritage for the children.

This class is larger than most of you think. It is found in the country as in the cities, though for obvious reasons it is in the latter that it is greatest and most dangerous. If you think I am exaggerating, I appeal for confirmation to many of the public school teachers and to any worker in charitable societies who has had even a limited experience. An hour's visiting in families they can take you to, will convince the most sceptical that this is the truth. Go among them and you will find they have no knowledge of the laws of life, no ambition, no hope, no care. And this class is being added to rapidly, both by natural increase and by additions from those who fail in life or are hampered by physical disability and who sink gradually into pauperism, though they may retain vestiges of self-respect and traditions of better conditions which make the lapse slow.

These people have the same political rights and individual power as the best citizen. Their vote counts just as much as any

other man's. But they contribute nothing to the welfare of society. On the contrary, they are its enemies, a charge upon it. If this class could be segregated and its growth curtailed, the danger would not be so alarming. But it can not be. Its influence is corrupting to all who come in contact with it. One bad boy or girl in a neighborhood is as harmful as a rotten apple in a bin. The evil is sure to spread and it spreads rapidly. It is spreading daily before our eyes in Indianapolis. It is in this class that child marriages are so frequent. Boys and girls marry and reproduce the homes and surroundings of their parents, and bring forth children doomed to misfortune of body and soul in pursuing again the lives of their parents.

The work of the Charity Organization among these people in our own city has emphasized the fact, discovered long ago, that little improvement can be expected among the adults under the most favorable circumstances. Work is not hopeless, but as a rule it is not encouraging. It is like the task of Sisypheus. But with the children it is not so. They are impressible and imitative. Habits are not hardened and tendencies may be turned. If they can be put under restraint and discipline ; if surroundings are given in which self-respect may be engendered and ambition aroused ; if the faculties can be trained to a limited extent even and an idea of forethought and responsibility be instilled in them, they may develop into respectable and self-sustaining members of society. They may cease to be a charge on and a menace to the community and become a support and strength. Experience has shown that much has been done and can be done for children by an attention that seems disproportionately small. The course of life in many instances can be changed by a little effort and a small influence. This work must be done by the schools. For several years it has been a part of this society's work to get these children into school. It has used every means in its power to that end, has visited them continually, plead with the parents, persuaded the children, given them clothes and done all that it could to put them under this influence and to keep them there. It has had no authority, beyond the threat used in rare instances of appealing to the law which permits the taking of children from vicious parents. The effort has accomplished much, but it fails at many points. If time allowed, I could give from our records many instances of its success, but I will confine myself to several examples of its failure.

## INCIDENTS SHOWING THE NEED OF POWER OF THE LAW.

Fred ———. Met him on street, went home with him, found two others there that ought to be in school, mother utterly indifferent as to whether they were in school or not, said they didn't have clothing good enough; this was furnished and they were started to school. In a few days, then out until Visitor went after them; in and out for several weeks after which Fred, a boy twelve years old, who could not spell his name, could not be gotten back.

Frank ———. Twelve years old, could not read; on the the streets; mother said she would like for him to be in school, but couldn't make him go; after much persuasion and clothing furnished, he went for several days then left and would not return.

———. This family have lived here many years; have six children, five boys; none ever went to school until the autumn of '93 the C. O. S. Visitor found them, and after much persuasion and furnishing some clothing, succeeded in getting one boy in; later two others went; attended very irregularly for about two or three months that year. Next year one of the boys attended a few weeks, and occasionally one of the others could be induced to go, but only a few days at a time; so irregular in attendance that teachers did not enroll names on school records. This was entirely due to the indifference and carelessness of parents. They are shiftless, idle, lazy and dirty, have no education themselves and have no desire or ambition to have children know more than themselves.

———. This is another family where there were five children, one boy and four girls, that were not in school until Visitor labored with them, when three were finally induced to go. The parents drink, mother worse than father, and neither cared whether children went to school. After they did start, parents made no effort to have them attend regularly but on the contrary often kept some of them out upon streets to beg. Father had regular work, and there was no good reason why children could not have been in school all the time. The thirteen year old girl was out of school and on streets so much that she finally left entirely and became a regular street walker.

Vicious. Albert ———. This boy is eleven years old, went to school regularly, both parents dead. Lived with grandmother, a

very nice woman. Was perfectly lawless in school; stuck pins through toe of shoe and reached foot to next pupil and stuck him. Given to vicious tricks of all kinds so that the janitor had to be called upon to manage him. Must be kept in principal's room most of the time until forbearance ceased to be a virtue and he was expelled.

Clarence ———. Twelve years old, father in bed, consumption; mother weak, not able to control boy; in school or out as he pleased. Much of the time would not be at home for days. Finally left city and C. O. S. of Philadelphia wrote here to say that Clarence was there. Was sent back in care of officer and committed by Court to Reform School but under promise of boy and mother to go to school, was released. Went with Episcopal sisters to a school in Lima. There a few weeks then ran off and not heard from since.

Begging. Gertie and Wayne ———. Eleven and nine years. Enrolled in school but out much of time. Reported to C. O. S. as begging. Mother claimed to not know that children begged. Said they sometimes went out to sell papers. When visit was made, Gertie was in bed claiming to have toothache. Mother asked: "Gertie do you beg?" Child would not answer but after repeated questioning, flew into a rage, struck at mother and said: "Let me alone you old thing, you know what I do."

It is evident from these citations that something more than moral suasion is needed. Our experience in the Charity Organization has led us to think that it will be found in a compulsory education law. We have advocated it accordingly and done everything possible to secure its passage. The experience of other communities has been the same. For example, in the City of New York, during the five years of 1870-71-72-73 and '74 before the enactment of a similar law, there were 6,105 children between eight and fourteen years of age arrested for various crimes and misdemeanors. During the five years of 1891-92-93-94 and '95 there were 2,546 arrests for the same causes, a decrease of nearly 60%. The decrease is in reality much greater, for we must remember that the population of the city in 1870 was 942,000, while in 1890 it was over 1,500,000. The authorities claim that this result is due wholly to the compulsory education law.

It is not essential to go into our own criminal statistics. The police authorities, the grand juries and the officers of the criminal court will tell you that their work would be lightened immensely if there were no juvenile law-breakers. It is probably safe to say that one thousand of the arrests here each year, or over eighty each month, are of this class. Probably the most experienced observer of criminals in the city, says that two-thirds of all the crimes are committed by boys and young men under twenty-four. Outside of this criminal class are many boys and girls whirling to ruin, who may be reached by this law. There are respectable and well-intending parents who cannot control their children for one reason or another, who will be glad to see this law applied to them. There are many wilful boys and girls who will be incorrigible under ordinary methods but who may be held in restraint by this law.

If one of our physicians were to come before you and convince you that in a certain locality of the city a noxious plant was growing which, when it ripened, would communicate a fatal pestilence wherever it touched; and if he were to tell you that it spread with great swiftness, every tendril turning into a root and running over the ground faster than the Russian thistle has done in the Northwest, what an alarm there would be. How quickly the community would act and exterminate the plant before the danger came. Yet we have a greater danger confronting us. We have a condition that is breeding a pestilence; that is corrupting the whole body politic; that is spreading material as well as moral poison; that in its ramifications touches every interest we hold dear and affects every motive of well-doing.

Shall we not bestir ourselves? Shall we not remember our duty? Society owes something to these children. They have rights, let us respect them. Society is beginning to learn that the old Spartans were not far wrong in their theory that every man belonged to the state and that the state had a right to make him serviceable to it. The preservation of society depends upon the faithfulness with which it maintains the health of its constituents. This compulsory education law is an attempt to do this. It may be weak in some of its construction and open to criticism. It may prove faulty in its execution, but it is a recognition of a crying need. Its enforcement will be of great value to this community and all the communities of our State. It is a beginning,

and there is always hope in a beginning. Let us not leave it to enforce itself and fail, but let us stand in solid rank in its support. If it is faulty, it can be mended when experience shows where to mend it. Let us determine here and now that so far as we are concerned, it shall have all the aid we can give it in the effort to avert danger and make life here better. He who saveth a soul shall hide a multitude of sins.

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### MUSIC IN MUSIC-LAND.

W. E. M. BROWNE.

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The fact that Cincinnati is well-known as a musical center leads one to turn naturally to its schools for the best conceptions of music, and most successful methods of teaching it. Music is a part of the daily school curriculum from the very beginning.

Cincinnati has one supervisor, who teaches in the normal and high schools, and oversees the work of eight or nine special music teachers, having the graded schools apportioned out in such manner that they can visit each school every five days (once a week.) Many of these teachers are men of great musical ability, and the desire of the writer to witness some of their methods led him to spend two days recently with some of these teachers, and to give the readers of the JOURNAL the benefit of his observations.

Children in the Cincinnati schools have the softer voices noticeable among the children of large cities, where music is properly taught. This may be in a large degree due to the exacting work of the teacher in requiring pupils to sing in a medium tone of voice. It is also true that the excessively loud tones, and ear-splitting noises indulged in by many children in their out-door play, which is the cause of most of their harsh and strident singing, are seldom found among children in cities, where gentleness of manner and quiet ways are taught them by their parents and teachers. Three hours of base-ball in a vacant lot on Saturday at which fifty boys are in attendance, will do more damage to their vocal organs than the best voice master on earth can undo in as many months. It seems to me that loud singing is an unknown thing in the Cincinnati schools, and how great the reward to those who hear such singing. As one remarked, "it's just like the birds, it's so sweet."

The preparations for Decoration Day exercises included the drilling of a chorus of boys and girls from eleven to thirteen years of age. It was my privilege and pleasure to attend a rehearsal of about five hundred, under the leadership of Prof. Junkermann. They sang a number of national songs in three parts. Such tones as this great body of children put forth; so smooth, so perfect in pitch, and withal sufficiently strong to fill the immense music hall, that I wished that all the children of Indiana might have heard them, and learned the value of taking proper care of the voice at all times.

The unanimity with which every one took part in the music lesson was another feature noted. No boy thought himself too insignificant to sing as best he could.

No school will have any kind of success in which a teacher allows pupils to elect what they will or will not do in the school room. The fact that children are made to understand that there is no sign of manliness or womanliness in the shirking of any duty laid down in a school room, has been the lever by which many a life has been made better and more worthy the living. This impresses itself on teachers who can see the effect of such discipline upon a room full of children. They all participate without any special invitation or urging on the part of the teacher.

In Cincinnati the "Natural" series of books is the text-book, and of course, the syllables (crutches, some call them) do, re, mi, etc., are used. The children read them very readily, so it appeared, but when pupils in sixth and seventh grades were asked to sing an exercise, or short song, and use other words or syllables than do, re, mi, etc., they did not seem to be able to do it with ease. The continual use of the crutches may make it easier for the pupil to get along, but weakens the mental music ability in reading. Experience has proven that it is as easy to train children to think the syllables do, re, etc., and say something else as it is to teach the syllables in the first place. This, with the tendency of the teacher to sing *with* the children, appeared to be the weak part of the work so far as it was our privilege to see it. Several tests were made with about the same results. In every case the pupils seemed to be surprised at the request, which is strange, in view of the fact that the later editions of music text books *all* recommend the sparing use of the syllables in every grade, even in number one.



In Covington, Ky., under the guidance of that genius, Prof. Bristow, the value of the music chart in first and second grades was demonstrated. Charts, after all, are only a substitute for the blackboard; but as many teachers have neither the time nor ability to write proper exercises, the chart is of some value, if used. The singing of the scale from any position on the staff by six-year old pupils is not only possible, but practical; and the teacher who early avoids the "rut" of the key of "C" has saved valuable time, which might otherwise be wasted in repairing the "breaks." With a pointer moving rapidly up, down, now across, dictating little melodies improvised by the mind which guided the stick, he took a hundred little voices through a happy half hour of "dry note reading" that was remarkable. The simple scale of eight tones is capable of furnishing many different tunes, and a skillful teacher can put a wonderful inspiration into a lesson that would otherwise be irksome.

In both cities the value of good rote songs was emphasized, and much of the good singing and deep interest was the result of such work. The songs were selected with the purpose of teaching some idea or thing which the children unconsciously imbibe with their gay song, which many of them carried with them into the street, singing it as they went to dinner.

It is with great interest that the efforts of book publishers to supply a suitable book for country schools is noted. At the offices of the American Book Company we were shown "Smith's Practical Music Reader," for ungraded schools, while Prof. Gantvoort, well known to Indiana teachers, is just completing a book for like purpose to add to his series. It was our good fortune to fall into the hands of Prof. H. M. Butler, formerly of Indianapolis, now with the American Book Company, whose services as a guide were not only kind, but valuable because of his knowledge of the schools and the teachers, thus aiding us in finding what we were seeking without loss of time. May he "live long and prosper" will be the wish of every teacher who falls into his hands, while visiting Cincinnati schools.

New Castle, Ind.

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A little girl brought a basket of strawberries to the minister very early on Monday morning. "Thank you, my little girl," he said. "They are very beautiful. But I hope you didn't gather them yesterday, which was the Sabbath day." "No, sir," replied the child, "I pulled them this morning; but they were growin' all yesterday."

## THE SEASON'S GAME.

Old Winter and our young friend Spring are playing as boys do,  
The good old-fashioned game of tag as if 'twere something new.  
A treacherous playmate, Winter, full of tricks as he can be ;  
We thought we'd bade farewell to him, yet here he is, you see.

We saw him disappearing a month or more ago,  
Toward the frozen Northland, his native home you know—  
We felt the icy farewell of his breath upon us blow,  
And we saw his cloudy mantle scatter the last flakes of snow.

And I know as he departed, he looked his shoulder o'er,  
And saw the Spring returning from the sunny Southern shore—  
Heard the patient, sealed brooklet when his fingers he withdrew  
From its lips, break forth in singing as it ran the meadow through,  
Looking up clear eyed and limpid at the arching blue o'er head  
Where the sun defined his shadow mirrored in its sparkling bed.

And lo ! Winter's snowy footprints the sweet, warm south wind found ;  
And she gently breathed upon them till the faintest, stirring sound  
Grew into an active striving as the hosts of tiny hands  
Reaching up for warmth and sunlight, broke at last their prison bands.

And o'er all the sleeping meadows where but late were robes of snow  
Spreads the richest, greenest carpet all with dandelions aglow.  
And the once bare, shaggy orchards flaunt their blossoms in the air,  
Beating time to joyous peans, and birds are singing everywhere.

And old Winter looking backward saw Spring wave his magic wand,  
Saw, responsive, joy and beauty o'er the earth walk hand-in-hand ;  
And he turns around so quickly, takes the young Spring by surprise,  
Taps him with such ice-cold fingers, and " I've got your tag ! " he cries.

He breathes upon the brooklets and their lips again are sealed ;  
Where the merry songsters warbled, silence reigns in wood and field.  
He shakes the gay, old orchards but yesterday so proud,  
And the dainty, pink white blossoms fold the old earth in a shroud.

Then as if he feels some sorrow for the mischief he has done,  
He whisks his cloudy mantle and a shower of flakes is blown  
Upon the pretty petals and each flake becomes a tear  
Of pity for the poor old trees whose blossoms were so dear.

And while old Winter's snowflakes all are turning into tears,  
The sun who's been in hiding behind a cloud appears,  
Looks down so very warmly—grasps the young Spring's tender hand,  
Fills it with the yellow sunbeams that from heaven to earth are spanned.

And he tosses them at Winter who beats a quick retreat  
To his snowy northern fastness—and Spring's triumph is complete.  
His bird choirs sang most blithely, the brooklets murmur on,  
Nature teems with life and beauty, certain that the Winter's gone.

But we'll find that sly old Winter has not given up the game,  
But anon keeps looking backward (children, too, will do the same).  
Shakes his finger at young Spring-time standing watchful by the brook,  
And says, " Though I can not get your tag, I will have the latest look ! "

North Vernon, Ind., May 3, 1897.

SUBSCRIBER.

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## **DEPARTMENT OF PEDAGOGY.**

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### **PHYSICAL ACTIVITY AN AID IN TEACHING.**

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The vividness of mental pictures is to a considerable degree dependent upon the extent to which thoughts are allowed to find expression in physical action. During the first six years of life the child acquires a large share of his education. Each year he probably learns more than he does during any later year of life, not excepting his college course. What are the means by which this great result is brought about? Two characteristics of these six years are especially noticeable. One is that he is almost constantly employing his mind. He propounds questions, finds their solution, makes observations of various kinds, etc. But during all this time, his physical activity is as striking as his mental life. He is using his back, neck, legs, arms, hands, etc., as abundantly as his mind. Undoubtedly, a partial explanation is that it is natural for him to do so. He is so constituted that if he did not exercise considerably, he would scarcely be able to contain himself. Hence, such physical action may be considered restful. But it is more than that. It is not an activity which merely accompanies mental action, being unrelated to it, but it supplements this action, it helps toward clearness of ideas. If a child says that a neighboring boy lives directly across the street and points in that direction, or, in general, if one accompanies an idea with the appropriate gesture, these two kinds of action make the idea clearer to the speaker, and to others, than *one* of them could make it. However, the child does much more than gesture. In the scenes that he imagines, he not only thinks out what might take place, but he goes through the actions themselves, and thus he makes use of two means for expression of ideas.

Now, we all know that a thought is very often not clear to adults until it has been expressed in words. Likewise, even though it has been expressed in words, it is not so clear as it becomes when acted out. Hence, this striking physical activity during the first years of a child's life is intimately related to his intellectual growth. It is one of the means by which he educates himself so rapidly during this period.

Suppose that when he is six years of age, he enters school, what conception should be entertained of his work there? Is it to be his occupation to sit still and think? Or at best, does learning for him consist in thinking, in free exercise of the muscles of the tongue, and of those of the hand and arm in writing and figuring? If an abundance of physical activity was characteristic of those years when he learned so much, and if it was a necessary means to that end, why should not provision be made for it in the school work? Why should not the method of teaching throughout the grades, at least, provide for plenty of physical movement whose immediate purpose shall be to contribute to vivid imaging and to mental growth? The conclusion seems evident. But how can this arrangement be effected? In the first place, one can plan to employ the hand in many kinds of subjects. For instance, if drawing is begun at the beginning of school life, children can learn to express their thoughts as freely with chalk as with words. For instance, they will illustrate such a point as Hiawatha's fight with the sturgeon, or as the interior of a coal mine, without the slightest hesitation. They not only can be made willing to step to the board when asked, but if they happen to be near the board, they will step to it unconsciously when words seem to be inadequate to express the idea. This result, too, can be brought about not by skilled instruction in technical drawing, but by daily practice from the beginning in expressing all kinds of thoughts with chalk as well as with words. Schools are already somewhat numerous in which this kind of work is now done, and their number can be greatly increased. The hands can be further employed in shaping clay to represent such objects as an Eskimo hut, or in using sand in geography work, or in painting a beautiful sunset, or in making objects out of paper, or paste-board, or wood. The thoughts represented by such objects can of course be expressed in words, but if in addition to that, they can be told through the work of the hand,

clearer perceptions can be obtained. In the second place, it is often just as easy to employ the whole body as well as the hand in this expressive action. For instance, it is well in geography for a pupil instead of saying simply that London is northeast of New York, to point toward it, or better still, to get up and walk toward it. It would be in place occasionally to have a walking exercise in the geography lesson with such questions as the following: Let us now suppose ourselves in Paris, will you walk toward London? Toward St. Louis? Toward Rome? Again, we are now in St. Petersburg, will you walk toward Buffalo? Toward London? etc. The entire class may be asked to face St. Louis, to face Duluth, Cincinnati, etc. During this exercise there is no need of talking whatever on the part of the pupils, they can answer the questions by their physical actions. Thus a pleasant variety is brought into the work, and it is a more thorough way of answering the questions put than the ordinary way. The author has found it to be the case very often that both children and teachers who know the directions in their locality and who can tell the direction that Philadelphia is from their home, will hesitate considerably before they will stand up and walk toward Philadelphia. Without doubt, this is due partly to the novelty of the request, but it is also due to the fact that a fuller realization of the direction is required in order to walk toward a point, and many people are not accustomed to mental imaging vivid enough to meet the demand immediately.

In primary reading, there is no reason why a child should always show that he comprehends a thought by expressing it in words. If he has just read the sentence, "The door was opened," he can himself quietly perform that action. Many good teachers follow this plan. In several studies, it is possible to act out scenes in some detail. This is especially true of literature and history. In studying the life of Columbus, young people often tell how Columbus appeared before Queen Isabella, and they describe the debate between him and the wise men of Spain. It is plainly an additional requirement to ask them to represent Columbus and the wise men and carry on the supposed conversation in class; but it is done in some schools, and where it is done properly, vivid picturing is secured.

The author is acquainted with a third grade that had an interesting experience of this kind in the story of Robinson Crusoe.

When the point was reached in the narrative where Robinson was to teach Friday the English language, Margaret was asked to represent Robinson, and Richard, Friday. They stepped out before the class, and after a moment's hesitation, Margaret began beating herself upon the breast and shouting to Friday "I, I, Robinson, Robinson," then she pointed to Friday and said, "You, Friday, you, Friday." This was done several times, but Friday understood his role sufficiently well to grin discouragingly and make a grunting noise. Margaret then saw that her plan was not succeeding and concluded to try another. Casting her eyes about her she spied the sand table near by, and seizing Friday by the hand she hurried him over to it, plunged her hand into the sand and shouted, "Sand, sand," making motions. She forced him also to take some in his hand, and speaking the word herself she required him to make the same noise. He attempted it and succeeded fairly well. From that time on Friday seemed to get the idea, progress was more rapid, and in a few more minutes several words were taught. In the same recitation Julius and George were asked to represent Robinson and Friday, and the former was to teach the latter that it was wrong to eat human flesh. The two stepped out before the class, and Friday quickly took up some human bones that were supposed to be lying on the desk and began nibbling them. Robinson seized him, appearing to be offended at him and pulled him away from the bones, at the same time shoving the bones away. He also told him that he should not eat human flesh, etc. But as soon as he let go his hold of Friday, the latter again proceeded to satisfy his hunger in the same way. This was repeated several times. Then Robinson seeing that his plan was not successful, picked up a chalk box that was supposed to be filled with bread and milk and began eating it himself with much pleasure, saying, "Good, good, bread and milk good." He drew Friday to him and offered him some of the food and also made him eat some of it, at the same time saying, "Good, good," and eating of it himself. Friday did not seem to relish it particularly but he took it. Thus gradually he learned what he should eat and what he should not eat.

In literature and history it is very often possible to find a portion of a narrative which can be nicely illustrated in this way. Of course there is a very unnecessary loss of time if care is taken

to give regular drill in presenting a given scene. What is required is simply impromptu work, impromptu representation of any scene ; nothing more is necessary.

One proof that such teaching as this secures more vivid pictures than otherwise is obtained is the fact that children who are taught in this way are quite likely to be made less self-conscious than they usually are, that is, they must so fully enter into the spirit of the situation that they forget self. This is a matter worthy of careful consideration on the part of teachers. Further than that, by acting out thoughts that are presented, children really get possession of knowledge more fully. Instead of ending with words in regard to a topic, if they close with actions, they feel that the ideas are more fully their possession ; which means that they feel self-confidence in regard to their knowledge. The presence of such self-confidence is itself another proof that the picturing is vivid, for this confidence is lacking where situations are not clearly imaged. It is, therefore, one important test of method to inquire to what extent the teacher provides for physical action as a means of producing vivid impressions.

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### THE COMMON THINGS.

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If you are an earnest teacher in the country schools, or in the grades, you have been reading thoughtfully the rapidly increasing pedagogical literature in books and in school periodicals—in fact, we need to say “ school ” periodicals, for articles on education and pedagogy have been numerous of late in our first-class magazines and newspapers.

You have pondered over the things meant by such terms as Herbartian, Froebelian, apperception, correlation, interest and many others now so much in vogue. You have been following philosophical discussions in psychology, the laws of development and growth, character building, etc. Some of this reading and thinking has puzzled you. Some of it has made clear to you that which was vague, or undiscovered. Some of it has led to ideals far higher than you ever expect to realize.

All this is well ; it is the road to knowledge and power, if you do not permit it to take you off your feet, and to leave you suspended in the air. You remember the classic story of the giant who gained new strength every time his feet touched the ground.

So, take care that, while your head may be high in the air, your feet are not taken off the solid earth.

In your every-day work there will be the same questions to meet and the same difficulties to overcome as before. You will have to teach Mary to speak properly ; John will still need aid in grappling with division of fractions ; you will have to help Peter in deciding whether this word is a verb or an adjective ; the questions of classifying this particular bough will be as pressing as ever. You will still have to help Mark to overcome his propensity to be sullen, Susan her tendency to giggle, Julia to resist her temptation to lie, Charles his itching for the property of others, and Ulysses his inborn disposition to be a bully.

If your reading and study help you to manage these cases better, as it can and should, well and good. But, if it leads you to ignore or to neglect them, there is a grand mistake somewhere which you need to correct with all promptness. Alas, for one who never soars ; but still worse in his case who soars out of sight of solid ground.—*Public School Journal.*

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### **LEND A HAND.**

(This department is conducted by Mrs. E. E. Oicott.)

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*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

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## **FOR THE GEOGRAPHY CLASS—TWO SKETCHES FROM ALASKA.**

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### **I. THE YUKON GOLD FIELDS.**

Turn to the map of Alaska and let us locate as nearly as possible a region where men are to-day digging for gold. It is so rich a field that some miners average finding \$50 and some \$1,000 worth of gold a day!

Find the 140th meridian. Alaska's eastern boundary, from the Arctic Ocean to Mt. St. Elias, follows the next meridian—the 141st—which is not shown on school maps.

Note where the 141st meridian crosses the Yukon river and its tributaries; there are the great, new gold fields. They lie in both Alaska and the northwestern border of the Dominion of Canada.



No one, as yet, knows their extent. Gold has been found along the Yukon itself and its various tributaries, even tiny creeks.

Forty-Mile River, or Creek, is shown on the maps of some geographies—Werner's Grammar School Geography is one. This river is in Alaska, and is rich in gold and has many miners at work along its banks. But the latest discoveries and what seem to be the richest deposits are on the Klondike River, which is in British Columbia, or Northwest Territory (provinces of the Dominion of Canada), and flows into the Yukon from the east. It is too small to appear on ordinary maps and so are the mining towns mentioned by newspaper correspondents. But Bonanza Creek, in the heart of the Klondike fields, is only an hour's walk from Dawson City, where miners can get supplies. This is a great advantage, because all supplies have to be drawn to distant miners by Arctic dog sledges.

The Klondike River and its many tributaries, which the miners call "pups," have during long ages worn away rocks and washed out the gold that was in them. The gold has sunk down through top gravel into the finer gravel and soil beneath. The soil and gravel containing gold is called "pay-dirt" or "pay-gravel." This "pay-dirt" usually rests upon rock and may be a very thin layer. To reach the "pay-dirt" the top-gravel must be shoveled off. The upper gravel may be from one to thirty feet deep. If the barren gravel is even ten feet deep, shoveling it off is a hard, long task; if it is more than thirty feet the mine can not be worked.

A prospector, as a man who is looking for a mine is called, goes along the banks of a stream digs through the gravel, takes some dirt and washes it in a shallow pan. The gold, if there is any sinks to the bottom. If he is not satisfied he tries other places. But if the prospect is good, he stakes his claim, shovels away the gravel, and instead of washing the dirt in a pan, he makes a sluice box through which he turns a stream of water. This is called placer mining. It is the easiest, quickest way of getting gold because the creeks have done the hardest work, that of breaking the hard rock which contained the veins of gold.

The size of each claim is decided by a vote of the other miners in the gulch or ravine. It is usually as wide as the gulch and extends 500 feet along the stream. But it may be longer or shorter according to the apparent richness of the pay-dirt. A

miner elected for the purpose makes a record of the size of the claim, and that is as good as a deed to it.

When a prospector is the first comer to a gulch, I do not know what determines the size of his claim. Possibly later comers may, if they think he has more than a fair share, vote to take some of it from him! If a man tries to jump a claim, that is to take part of a mine that belongs to some one else, he is quite likely to be shot by the owner. If he steals, or kills a miner to rob him or take his claim, the other miners are likely to shoot or hang him. The Klondike district is so far from the United States and populous part of Canada that the miners are compelled to make their own laws. There are no officers to arrest criminals, and no jails to put them in, so some laws have to be severe. Many lawless men go there and, unfortunately, many good men become reckless after they arrive. Food is scarce and high yet, sad to say, cost does not banish whisky. At night men drink and gamble away the gold they have worked so hard to find.

Bonanza creek in the center of the Klondike district is only about twenty-five miles long. Yet there are more than five hundred claims staked along its banks and that of its tiny tributaries. Five-cent dirt, that is soil that averages five cents worth of gold to the pan, makes a good claim, because it will yield \$50 a day to its owner. In the Bonanza district more than forty claims average over \$1 to the pan, that is \$1,000 a day. It is not uncommon to find \$50 worth of gold at one washing, and one miner found \$200 in a single pan. On El Dorado creek, which is near Bonanza, there are several claims that average \$5 to the pan, that is \$5,000 a day. One mine averages \$13 to the pan. The thought of digging up \$13,000 a day like digging potatoes, almost turns one's head. But let us take sober second thought. Freight is so high and food so hard to get that potatoes cost \$1 a pound, bacon 85cts. a pound and other things in proportion. A claim that does not yield its owner \$10 a day does not pay. Everybody is fortune hunting and will not work for wages. So when a man wants a sluice box, he, with his own hands, has to cut down trees and saw out boards to make it. It sometimes requires a whole season to clear off gravel and get a claim ready to work. What is a miner to live on during the time?

The winters are so cold that the mines can be worked only a part of the year. A great number of miners have frozen or

starved to death. Doubtless others have been robbed and murdered. If a man becomes sick he can hardly expect effective medicine and careful nursing. He must take miner's luck, which like fisherman's luck, is very uncertain.

One correspondent reported that miners from the United States had to pay a tax to Canadian miners. Such a tax is hardly fair because the boundary is unmarked. It is known that the 141st meridian forms the line, but to exactly locate a given meridian at a particular place requires much time and careful surveying. Until a joint commission of British and United States expert surveyors shall have determined the line, it will be impossible to know whether certain territory is subject to Canada or the United States. But the richness of the Yukon gold fields is proved. People will adapt themselves to the climate, and develop the country, and cities will spring up as they did in California nearly fifty years ago. Perhaps some of the boys and girls to whom this is read, may sometime live in the Yukon gold fields, perhaps near the very boundary line which is now unmarked.

## II. MOUNT ST. ELIAS.

Mount St. Elias is of special interest this summer, because two expeditions are to attempt to reach its summit. One party will be led by officers belonging to United States Coast Survey, the other by Prince Luigi of Savoy, who is a nephew of King Humbert of Italy. No one has ever reached the summit of this mountain, though the attempt has been made several times. So both of this year's expeditions are eager to be the first to stand upon the peak almost  $3\frac{1}{2}$  miles above the level of the sea. Besides the honor, and the pleasure of overcoming tremendous obstacles, information gained from mountain tops is of great interest to science. The whole earth is surrounded by an ocean of air. Close to the surface is what is called the dust shell of the air, because it is affected by the dust and smoke that arises. On mountain tops the air is clearer, and many observations can be made and much information gained above the clouds that are impossible below.

Prince Luigi has for some time been in correspondence with the officers of the Appalachian Club in regard to the expedition. Many valuable books belonging to the club were sent to him in Italy to give him all available information. Prince Luigi

will be accompanied by friends, some of whom are experienced climbers of the Alps; also, by porters, professional guides, and a celebrated mountain photographer.

Speaking of the expedition, *The Week's Current* says :

"Prince Luigi of Savoy is only twenty-four years old, but is an experienced traveler, and is eager to wear the laurels that will mark him as the first to reach the top of one of the loftiest peaks in the world. Mount St. Elias lies far from supplies, and the explorer must carry with him from Sitka everything he expects to use. It is the center of a great region of glaciers and rugged mountain spurs, very few of which have ever been crossed by human beings. Above all other points of interest, Mount St. Elias offers a longer ascent over unbroken snowfields than any other mountain outside of the Arctic regions. The line of perpetual snow begins at 3,000 feet above the sea, and from that point on ice axes and heavily nailed shoes and safety ropes are the unavoidable accompaniments of the climber.

"A number of attempts have been made to climb Mount St. Elias since it was first sighted by Bering on St. Elias Day, 1741. The most notable of these were the *New York Times* expedition, under Lieutenant Schwatka, in 1886; the Topham expedition of experienced Alpine travelers in 1888; and the two expeditions by the National Geographical Society in the summers of 1890 and 1891. The Topham expedition reached a height of 11,460 feet after fourteen days of perilous climbing from the foothills on the south side, and the last of these expeditions, under I. C. Russell, who is to accompany Prince Luigi this year, reached an altitude of 14,500 feet."

Watch newspapers and magazines for information regarding the two present expeditions. Probably copies of the views taken by Prince Luigi's photographer will appear in leading dailies and magazines.

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#### THE FIRST ANNIVERSARY OF THE N. E. A.

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Because the thirty-sixth meeting of the National Educational Association is near at hand, I have read with special interest an account of the first anniversary—the second meeting—of that body as it appears in a copy of the *INDIANA SCHOOL JOURNAL*, dated Aug. 1858.

The following brief extracts will be of interest : "The President, Z. Richards, of Washington, delivered an address, 'On the Agency and Province of the Association.' He contended that teachers should labor to have their calling recognized as a profession" (that has a familiar sound) "and that none but teachers should examine candidates for the profession. He suggested that all teachers, both public and *private*, should be required by *law* to pass an examination before entering upon their responsible duties. This might be profitably introduced as a subject for discussion at our next State meeting." (The question of examining teachers is certainly a live one now thirty-nine years later, in Indiana educational circles !)

President Richards "also suggested the establishment of a Central National Educational Agency, and a National Educational Journal."

"Through Mr. Rickoff, formerly Superintendent of the Cincinnati public schools, invitations were extended to visit the Mercantile Library, Mr. Longworth's residence, gardens and wine cellars, and to witness in the Fifth Street Market, at 5 o'clock, the trial of a new steam fire engine. These invitations were all accepted."

There were three addresses besides that of the president, "reports from different states in regard to their educational affairs," and a general discussion on Parochial schools in which many participated. At the closing session the Hon. Horace Mann read an address on "The Motives of the Teacher." (The Hon. Horace Mann took an active part in all the discussions of the Association). "The following list, which we think is somewhat imperfect, contains the names of the *Indiana* delegation : Profs. Hoyt, Young, Thompson, and Challen, Todd, Bowen, Phelps, May, Olcott, Cole, Shortridge, Henkle, Bush, Bennet, Hunter, Johnson, Brady, Moore, Kent, McGill, Miss Potter and Mrs. E. C. Cole."

It would be interesting to know how many of these twenty-two delegates are now living, and whether any of them attend, in 1897, the thirty-sixth annual meeting of the Association. May the Indiana delegation to Milwaukee be twenty-two times twenty-two!

The following, from a recent number of *The Intelligence*, is interesting:

"A handful of men assembled in the city of Philadelphia, August 26, 1857, and organized, the attendance being so small that every member present had to accept an office in order to fill all the places provided for by the Constitution. The second meeting—the first anniversary—was held in Cincinnati in 1858. Of the thirty-eight enrolled members only five put in an appearance at this meeting—the president, the first vice-president, the secretary, and two counselors. At the first session, by adroitly locating the three available members in different parts of the large audience which assembled to welcome this 'national' body of educators, the meeting was opened by proper motions, which culminated in giving an opportunity to all present to become members of the Association. By this means, and without divulging the small number of members from 'abroad,' a working body of seventy-five members was obtained on the spot, and business proceeded without embarrassment. The Association now includes twelve different departments, and has a permanent fund of about \$50,000."

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## **PRIMARY DEPARTMENT.**

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the  
Anderson Schools.*

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### **PHASES OF ELEMENTARY LANGUAGE.**

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There are at least three things which the language work of the primary grades should try to do : 1. To lead the children to form the habit of expressing themselves clearly. 2. To form the habit of using language grammatically correct. 3. To increase their vocabularies. This necessarily includes habits of careful observation and discrimination as a basis for expression.

There is sometimes an idea that any conversation, no matter how desultory, answers every purpose for primary language. While children should be encouraged to talk at the proper time and place, rambling talk about anything which may happen to suggest itself is far from being the highest.

What is commonly known as nature work affords excellent material for language lessons. The children examine bark, buds, leaves, flowers and fruit; they observe birds and animals, their habits and uses. They plant seeds and watch the sprouting and

growing ; they notice differences in soil, temperature, moisture, sunshine and clouds. They learn to use their eyes and hands, and as a result, they have something worth talking about.

In addition to this material, there are elementary lessons in literature, myths and legends. These the teacher tells or reads to the children, and they in turn represent their ideas in drawings and oral reproductions. A word should be said here in regard to myths, fairy tales and legends for children. Some careful thought has been given this subject by men in whom the educational world has a great deal of confidence. One objection offered is that many of the ideas presented are absolutely false. No bean stalk ever grew as high as a house in a single night ; a dragon's teeth if sowed would not spring up into swords—besides, there is no such thing as a dragon ; science can find no trace of a monster, the hairs of whose head were writhing snakes ; it is impossible that a person be chained to a rock for ages and be compelled to submit to the torment of having his internal organs constantly eaten out by a vulture, and then these organs as constantly renewed ; it is all an untruth about there being a Santa Claus and his coming down the chimney. It is said that these things are absolutely false, and if a child learns them, he must afterward take time from positive work to unlearn these childish fancies. Material of this kind, it is said, gives children a distorted idea of life, of nature, of cause and effect.

Before deciding to discard this great field of material, the teacher ought to consider some points presented on the other side.

In the first place, it is admitted that as far as some of these stories are concerned, the children are better off without them. I should question very much the advisability of reading to children the "Gorgon's Head," "Snow White," (Hans Anderson) or "Prometheus." The teacher must exercise good judgment in the selection. But most of these stories have figured in literature, music, sculpture and painting through many centuries. It is doubtless because of some universal trait they possess that they have lived. They oftentimes represent the race at a period of its development when it seemed necessary to use concrete animals and people in which to embody the truth as they saw it. These stories can be presented in such a way that the children may see that the form or concrete embodiment is not the thing which is the truth—it is only the setting which holds the stone and shows

it to good advantage. There is a little story that the bluebell was once a white flower growing at the bottom of the valley. All this flower could see was a bit of blue sky by day and a star at night. Looking upward all day long, it wished it might change its color to that of the spot of sky it saw and loved. One evening when the star looked down, it no longer saw a white flower, it had turned blue. It came to be like the thing it saw and loved. It hardly seems necessary to point out the truth in this little bluebell's story. It is the same as the great underlying idea in "The Great Stone Face" and in the character of "Jean Valjean" in *Les Miserables*. It is the life history of every person who has an ideal and who consciously and persistently works toward it—he, after a while, becomes the embodiment of his ideal. No insignificant part of a child's life is made up of his own fancies. Well selected legends and fairy tales help to supply material for this phase of the child's creative life, and at the same time, it is furnishing him with a fund of mythological and legendary lore that will be invaluable later in life in interpreting the fine arts.

Then, again, there are certain phases of historical material that every primary pupil should be led to see and appreciate. He should hear from the teacher the stories of Thanksgiving, Christmas, Easter and Decoration Day. He should hear of Longfellow, Whittier, Bryant; Washington, Peabody, Luther and Lincoln. The child should learn of the particular civilization of the time and place of the man under discussion. The children ought to live, in a small way at least, what the race has lived at different periods. He best appreciates this if the childhood of the man is most dwelt upon. If Lincoln is taken as a boy living in the log cabin in Kentucky, with a vivid description of the house and its furniture; the trip over into Indiana with the mule team and all that the Lincoln family possessed loaded on the wagon; the misfortune when crossing the Ohio River; the kind of home made in Indiana; and soon through the entire life, the children will see how people used to live in the home, how they traveled, how business was carried on, through the story of the lives of representative men. They finally come to see that *growth* is the characteristic feature in the life of peoples. Throughout all this work the teacher must be master of the art of story telling.

Punctuation and capitalization should be begun with the very first year of school, when the children make their stories from the



letter cards on their desks or write them on the board. This should be a habit long before stereotyped composition work is begun.

The teacher must stand ready at all times to give the child new words when he is ready for them. It may be done :—

*Directly.* When the children are talking about four-footed and two-footed animals, the teacher gives them the terms *quadruped* and *biped*. Or they may be talking about the parts of a flower and she tells them the parts are called calyx, corolla, sepals and petals. This is a very common way of increasing the child's vocabulary.

There is another plan of increasing the child's vocabulary that requires more skill on the part of the teacher. It is done :

*Indirectly.* The teacher uses a new word in such a way that the child infers the meaning. A first grade child asked the teacher for assistance. The teacher said she would help as soon as it was *convenient* for her to do so. The word, *convenient*, was new to the child. In the conversation that followed, the teacher used the word three times and in such a way that the child knew just what was meant. In a few days, the little girl used the word, *convenient*, of her own accord. This is simply typical of the way children acquire most of their words. Teachers must learn to talk a little above their children.

It should not be necessary to say that the teacher's English should be above reproach. The teacher's language is the children's model, and when she says *seen* for *saw*, *went* for *have gone*, and *was* for *were*, there is, indeed, little for the language of the children who go to that school. A person who violates every rule in conversation sometimes makes a grade high enough on technical grammar to give him a license.

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### THE OUTSIDE WORLD IN SCHOOL.

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In the average school there is very little done in which the child sees any relation to the life outside of school. The games, toys, processions and shows which he enjoys at home and on the street are not to be mentioned inside the sacred precincts of the school. Everything in which his childish mind is interested must be given up as soon as the school bell rings. Part of this, that is at least the active participation must, of course, go, but the

teacher who understands her children will help them to relive it understandingly in the school-room. It is a teacher who does this from whose room I am going to give a few pictures.

Wallace's circus and menagerie had been in town. A day or two later I noticed on Miss B.'s wall all the different pictures taken from school papers of elephants, camels, giraffes, lions, tigers, zebras, horses, hogs, leopards, sheep, ostriches and chickens, which the teacher had collected in several years. This display the children told me was their show—it was a procession. The reading lessons for this class, beginning with first-year work last fall, were on the procession, the elephant, the camel, the lion, and the ostrich. The children gave what they could remember of the appearance and habits of each animal. Then the picture was examined for other characteristics. The little stories were put in an interesting way, as, "Did you see that big lion? He was in a cage. A man was in the cage with him. Will the lion hurt the man? I should be afraid to ride in a cage with a lion." In another lesson I saw this, "How large the lion's head is. I heard him roar. He can roar very loud. I saw his big paws. His head looks like a cat." There were conversations first on these animals, and as a new word came in which the teacher wished to use in the reading lesson she put it on the board. When they were talking about the lion she told them she would put its name on the board. She then printed the word *lion* and at various times called their attention to it. She also put on the board the words *paws*, *head* and *cage*. At recess she put the reading stories on the board and had the reading lesson immediately following. That evening she hectographed the stories and the next day gave each child a little slip containing the stories and the children then read from their papers. The children drew the animals as they remembered them or copied them from the pictures of the animals in the "procession" on the wall around the room.

A dog and pony show was also in town for a day or two, and I noticed an entire reading lesson based upon this show. It began, "Have you seen the dog and pony show? Yes, I have seen it. There was one baby pony called Indianapolis. It is very small. A man carried it in his arms," and so on. The children were thoroughly delighted with their reading lessons and each was anxious to read the entire lesson to me.

This teacher never loses an occasion to weave her reading work around some point of interest the children have outside of school. Easter, eggs, and rabbits receive due attention at Easter time, and flowers, soldiers, the flag, and love of country come in for Decoration Day. If this woman were to teach school near the Fourth of July she would have a series of lessons based upon the story of our liberty, cannon, fire-crackers, celebrations and the flag. The children thoroughly enjoy the school because it allows them to talk over the things they enjoy most on the outside, and they have a fuller appreciation of such celebrations, because they are explained in the school. The school and the life outside of school are made to work together.

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### THREE THINGS.

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There are three things to be watched lest they become fixed habits. First, *nagging*. In a recent visit to a primary room of youngest children I was particularly struck with the absence of all nagging by the teacher. A little boy began to hum in an absent-minded way. "Who has to hum?" asked the teacher in a pleasant, half-chiding way. The boy looked up smilingly and *stopped humming*, which was all the teacher was after. Wasn't that better than to say, "Stop humming! If I catch you humming again I'll punish you." The nerves of both children and teacher are saved and it is a good thing to save nerves and friction when you can. Again in the same room a girl was playing with her shoe-buttons during recitation. "Who isn't helping?" asked the same teacher. The little girl was all attention in a moment, and had not been smoothed the wrong way. The absence of nagging in that room was a blessed relief to the visitor, to the children, and to the teacher as well. See how often you can forget to say *Don't* this year.

*Heavy, shuffling walking* by the children. It is astonishing how much of this shambling motion is permitted in the school-room by teachers who never seem to mind it or know it. Little children, particularly boys, often bring this habit to school in an aggravated form. It is as if the home people had never even noticed or attempted to correct it. Begin the very first day to correct this heavy dragging step. Not by saying, "Don't walk that way," but by devising some way to get the light, buoyant step.

Not a tip-toe—that is almost as bad. Children have to *learn* to handle their legs and feet. They are as much in the way as are hands sometimes.

*Thick, indistinct enunciation* is another of this prominent trio of evils. It is an exception if children speak clearly and distinctly in the school-room. It has been considered “cunning” at home for the babies to talk indistinctly and the teachers have it all to undo. Unlearn it *gently*, but correct it as persistently as you would pull weeds out of a garden. Not once, but every day. They will be sure to grow over night. It is just possible that teachers themselves are not the best example in this respect. Nothing better to correct this tendency than frequent phonic drill.—*Primary Education*.

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## EDITORIAL.

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### DR. BURROUGHS AND NON-STATE COLLEGES.

*Mr. Editor*—I have read with interest what Dr. Burroughs has to say in the June JOURNAL, about the late educational bill. I am in sympathy with much that the doctor has been contending for, but I am much surprised at the spirit manifest in his article. I am sorry that he does not simply and fairly discuss the matters in controversy without insinuating that those holding different views are schemers, if not really dishonest men. When he calls the State Board of Education an “educational trust,” and uses the term in a bad sense he does not advance his cause.

Dr. Burroughs is certainly guilty of “special pleading” when he states that Wabash college is not denominational. As it was founded by Presbyterians, is now, and always has been, under the exclusive control of this denomination, it is certainly a denominational school or else we have none in the country. This is not in the least against it, but it *is* denominational. It is doubtless true of Wabash, as it is true of most, if not all the denominational colleges, that no sectarian teaching is done, outside the theological departments, where such exist.

The doctor says that Wabash sustained a normal department till 1891. Strange! The writer has been a teacher in the State for more than twenty years, and never before heard of it, and is not able to find any one that has.

That Wabash is a good college no one wishes to deny, but that it has done special work in training teachers is news. This claim is the more remarkable since most of the teachers of the State are women and Wabash is the only college in the State (except Notre Dame) that does not admit women.

The good doctor closes his article by saying that the Educational Bill failed because it was “mechanical, divisive, partial, not vitally and organically constructive; it was not in harmony with the genius of Indiana educa-

tion as shown in its history and spirit." But he says that he was in favor of almost everything in it. This bill did not touch the law that organized the State Board of Education, neither did it refer to the twenty-year old law under which the state normal diplomas are made equivalent to a state license. Why did the doctor not say the proposed law is all right, but we want other parts of the school law changed lest possible abuses may arise.

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[The above letter is printed because the JOURNAL wishes the freest possible discussion of the matters referred to. It is to be hoped that all insinuations and questioning of motives will be refrained from.—EDITOR.]

### REFORM SCHOOL FOR BOYS.

The writer recently made a visit to the Reform School at Plainfield, and was much pleased with what he saw.

There are at present about 550 boys in attendance. These boys are sent there for various crimes and for incorrigibility. It is one phase of compulsory education. When the new compulsory law has a chance to do its work this school will be less crowded. This school should be classed with the *educational* institutions of the State, because its work is educational in all its stages.

To begin with, every boy must go into school and learn to read and write at once. Especial care is taken with the letter writing. Once a month each boy must write a letter to his parents or some friend. The writer examined several sets of these letters and does not hesitate to say that the penmanship, spelling, composition and form will compare favorably with anything that can be found in corresponding grades in the best schools in the country. All the boys that are old enough are required to work a part of the time, and each one is expected to be able to know a trade or some line of work by which he can earn a living when he leaves the institution. A boy committed to this school must remain till he is twenty-one, unless his conduct is such as to entitle him to an earlier discharge.

The superintendent is all the time on the outlook for homes for his best boys and sends out many every year. If a boy is sent out and then lapses into bad habits he can be brought back to the school without a new trial. The record shows that from seventy-five to eighty per cent. of the boys discharged from this school prove to be really reformed and make self-sustaining citizens.

The head of this school is T. J. Charlton, who is well and favorably known to the educational people of the State. He is specially fitted for the important position he holds and his conduct of the school is beyond just criticism.

### THE NON-STATE COLLEGES.

The non-State colleges need very much just now to pray to be saved from their friends.

The Methodist ministers of Indianapolis at a recent meeting, after discussing for some time the State and non-State colleges, in which the discus-

sion was all on one side, resolved that the State should not give money to institutions, but should give it to individuals and allow them to spend it in any college they might choose. This is bad, very bad, inexcusably bad. This is worse than what Bishop Ireland, of the Catholic church, advocates. His plan is to have the State license all teachers and fix the standard of instruction in all schools, and make all schools subject to State inspection, and when pupils are educated up to the required standard, whether in State or church schools, they should draw from the State their per capita. Our Methodist friends propose to divide the school fund among the denominational schools *without* any State inspection. THE JOURNAL is heartily in favor of non-State colleges and feels that they have done and are doing a great educational work, for which they have never had due credit, but is not in favor of giving them State money. The college men themselves are certainly not asking this. Such a move would be the entering wedge to the division of the entire school fund, giving a part to each church. This would be the beginning of the end of our American school system.

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#### THE WORLD'S LARGEST SCHOOL.

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The largest school in the world is one mainly supported by Baron Rothschild in one of the worst slums of London. There are in it 3,500 children, coming from the families of the poorest foreign Jews, and there are a hundred teachers. It is well known that this is Lord Rothschild's pet institution, and were it not for his munificent support, the school would be unable to meet its vast expenditure. It is owing to his generosity that free breakfasts are given every morning to all children who wish to take them, no questions being asked. Again, he presents every boy with a suit of clothes and a pair of boots in the month of April, near the Jewish passover. An idea of the poverty of the children may be had from the fact that not more than two per cent. decline to avail themselves of this charity. A second pair of boots is offered in the month of October to every child whose boots are not likely to last during the approaching winter. It is scarcely necessary to state that few do not get them. A very popular feature in the school is the savings bank department, instituted by the president. In order to encourage habits of thrift, he allows an interest of ten per cent. per annum on all savings. The teachers are also permitted to avail themselves of the benefits of the bank.—*Selected.*

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#### WHY PRINT ANSWERS TO QUESTIONS?

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Occasionally a letter reaches this office asking why the answers and questions are not printed the month after they are used. The answer is this: The questions are used the last Saturday of the month, and can not be had earlier than this. To wait for them and then have them answered would delay the issue of the JOURNAL from a week to ten days. The answers are printed for the benefit of those who wish to use the questions as a means of study and review.

Once a year, or once in two years, or once in three years, immediately after an examination, it is desirable to have the answers earlier in order to compare answers made in the examination and those printed. This would not change the result in the least, but would be a gratification.

Now, for the sake of this gratification once in one, two or three years, the JOURNAL would have to be mailed later every month, and besides this, the answers being made in a hurry, would necessarily be less accurate and less satisfactory. For all practical purposes the answers are just as good one month as another. We are satisfied that a large majority of the teachers prefer that no change be made in this regard.

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#### THE NORTH POLE.

Two items of news will interest Arctic explorers and students. One is the announcement that Mr. Andree has started for Spitzbergen, whence he hopes within a few weeks to make his unique attempt to reach the pole by balloon. The other is the action of the navy department in granting five years' leave of absence to Lieutenant Peary, to give him a chance to test his theory that higher latitudes than have yet been reached may be attained by establishing successive colonies as bases of supply, and then making a dash toward the pole. Early in July, Lieutenant Peary expects to start on a preliminary expedition to the west of Greenland, the object of which is to establish the first Esquimau colony north of Whale sound, to assist him in the more important enterprise which he will undertake next year. It is his purpose, by the way, to rely chiefly on Esquimau aid rather than on the assistance of white companions. His undertaking is regarded with hopeful interest by the American Geographical Society, which will give him substantial aid.

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#### VACATION SCHOOLS.

Vacation schools are now claiming the attention of people all over the country. In the cities, especially the larger cities, large numbers of children when out of school have no place to go and nothing to do, and this means that they go into the streets and find something to do. To meet this emergency good people in many cities have undertaken, by private means, to provide play grounds and certain kinds of instruction for these children. The instruction is intended to be largely along the lines of manual training, drawing, clay-modeling, music, nature study, sewing, etc. In some places excursions to the country have been provided; in other places no formal instruction has been given, but a sympathetic teacher is present to direct the plays and exercise needed authority, to the end that only good influences shall be exerted over the children while at these places.

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#### QUEEN VICTORIA.

On June 22, 1837, on the death of William IV, Princess Victoria succeeded her uncle and became Queen of England. So June 22nd, just past, was the 60th anniversary of her accession to the throne. This day was cele-

brated with much pomp and pageantry, not only in Great Britain, but throughout the English Empire. Victoria is noted not only for the unprecedented length of her reign, but also for the fact that she is Queen of the greatest nation in the world that has a monarch. Yes, Queen Victoria is a great Queen and a great woman, but "her chiefest greatness is her simple goodness, and she will go down to history beloved as much, because she has set forth to women the highest type of womanhood, as because she has exhibited to the world the noblest type of sovereignty." She was eighteen years old when she became Queen, so she is now seventy-eight. Her individuality as a woman and her simple allegiance to the duty of the hour, together with her pure and blameless life, make her beloved, not only by her subjects, but by all the world.

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N. E. A.

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Do not forget that the National Educational Association will meet in Milwaukee, July 6-9.

The comparatively short distance and consequent light expense bring this meeting within the reach of hundreds of Indiana teachers. The usual reduction in railroad fare has been secured, *i. e.* a single fare plus \$2 association fee, for the round trip. Twenty-eight trains run daily between Chicago and Milwaukee and a steamship line makes daily trips.

Indiana will have a room as headquarters in Hotel Pfister, which is the Association headquarters, but no hotel is designated at which Indiana teachers are expected to stop. To secure accommodations write to State manager, W. R. Snyder, Muncie, Ind. for circular of information, or apply direct to Arthur Burch, Milwaukee.

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THE act of President Draper in making a personal loan to the state of Illinois of \$50,000 to relieve the trouble incident upon the Spaulding bank failure, is a credit to himself, the university and the state as well.

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THE Baroness Bertha von Bulow is warmly welcomed in New York. She comes to this country in the interest of the free kindergarten work which she is carrying on as a representative of her aunt, the well-known Baroness von Marenholtz-Bulow, who during her lifetime was the leader of all the Froebel work.

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ONE of the most notable visitors at Milwaukee during the meeting of the N. E. A., will be Helen Kellar, the deaf, dumb and blind girl, whose wonderful achievements have given to her and her teachers a world-wide reputation. She will take part in the meeting of orally taught deaf children to be held at Grand Avenue Methodist church.

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THE INDIANA HIGH SCHOOL ORATORICAL ASSOCIATION, which held its first contest in Indianapolis, May 21, has planned that for the future, the State shall be divided into eight districts. All the commissioned high schools in the district contest, and the winner will represent his district in the State contest. This plan will open the way for every high school pupil in the State to try his power at oratory.



## QUESTIONS AND ANSWERS.

### STATE BOARD QUESTIONS USED IN MAY.

**SPECIAL NOTICE.**—For the six examinations, beginning with May, 1897, the questions in "General Culture" will be based on Guizot's History of Civilization, covering one of the Township Institute Outlines (1896-97) at each examination, beginning with the first.

For the same examinations the questions in *reading* will be based on Tompkins's "Literary Interpretations," covering one of the Institute Outlines at each examination, beginning with the first.

The questions in the "Science of Education" for these examinations will not be based on any particular text.

**WRITING AND SPELLING.**—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The handwriting of each applicant will be considered in itself, rather than with reference to the standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

**ARITHMETIC.**—1. Find the sum of  $\frac{1\frac{1}{3}}{3\frac{1}{4}}$  and  $\frac{8}{3\frac{1}{2}}$

2.  $\frac{1}{8}$  of 126 is  $\frac{3}{4}$  of what number? Give analysis.

3. Reduce .35 mile to integers of lower denominations.

4. What per cent. of  $12\frac{1}{2}$  is  $8\frac{1}{2}$ ?

5. A man sold a cow for \$30 and lost  $16\frac{2}{3}\%$ . He then sold another cow at a gain of 16%, and thereby made as much as he lost by the sale of the first cow. What was the *selling* price of the second cow?

6. What is the interest of \$137 for 3 years, 1 month and 16 days at 5%?

7. How many feet, board measure, in 8 planks 4 inches thick, 18 feet long and 16 inches wide?

8. Given a bin 3 feet high, 4 feet wide and 5 feet long, how many bushels of wheat will it contain?

9. How many meters in 4 km., 3 dm., 2m., 5dm., 3 cm.?

10. Discuss the arithmetic work in the State Manual and Course of Study. How does it meet our present needs?

**SCIENCE OF EDUCATION.**—1. What are the principal reasons for and against compulsory education?

2. In what ways should the school endeavor to educate the moral nature of the child?

3. For what reason should the public school refrain from teaching sectarianism and theology?

4. Why should the school do what it can to promote the physical development of the child?

5. How is rational memory different from verbal memory?

6. What common school studies are well fitted to train the rational powers?

7. What is the value of supplementary reading in the grades?
8. Name some of the excellences and some of the defects of Indiana's school system. *(Any seven.)*

- READING.—1. What is meant by the nature of literature? 10%.
2. Make it clear that the nature of literature, or reading, determines how to teach it. 10%
3. What is meant by the theme of a discourse? What are the marks of a literary theme? 10%
4. What is meant by the form in a literary selection? How does it differ from the theme? 10%
5. Make clear the distinction between prose, or didactic discourse, and poetry, or literary discourse. 10%
8. Read a selection chosen by the County Superintendent. 50%

HISTORY.—1. What and how many were the great compromises with slavery?

2. Give your estimate of James Madison. What is your source of information?

3. What have been the causes and effects of fertility of invention in agricultural machinery in the United States?

4. What are the evidences of progress and a general uplift in education in Indiana within your own experience?

5. State the arguments by which the southern people justified slavery.

SCIENTIFIC TEMPERANCE.—1. What is a stimulant? Is the use of stimulants to be commended? Name some of those more commonly used.

2. What is a food? Can alcohol be so classed?

3. State the effects of alcohol, so far as is known—

(a) on the action of the heart;

(b) on the capillaries;

(c) on the general circulation of the blood.

4. Does alcohol affect these organs directly? Justify your answer.

5. Under what circumstances is the use of morphia morally legitimate?

6. What is its action on the nerve centers?

7. Does a man exercise good judgment who drinks alcohol freely just before a protracted exposure to cold? Give reason for your answer.

*(Any five.)*

PHYSIOLOGY.—1. How are the bones adapted to withstand severe strains?

2. Show the relation of nerves to both voluntary and involuntary muscles.

3. What artificial means may be employed to assist digestion?

4. What is the function of the liver?

5. Describe the structure of an artery and indicate wherein it differs from a vein.

6. Indicate the parts of the brain which are the seats of voluntary and involuntary action, respectively.

7. Explain the relations of the kidneys to the blood.

8. Describe the structure of a tooth.
9. Give some suggestions as to the care of the ears.
10. How would you illustrate the process of osmosis, or the passage of substances in solution into the blood through the membranous walls of the cell?  
(*Any eight.*)

GUIZOT'S HISTORY OF CIVILIZATION.—1. What is the meaning of civilization? Make a summary of the tests of civilization.

2. Distinguish between civilization in general and any special civilization.
3. Summarize the distinction between European civilization and the civilization of the ancient world.
4. Why could the City Republic conquer the world better than she could rule it?
5. Name the chief bequests of Rome to civilization.
6. Discuss the services of the early church and civilization.
7. Mention some of the contributions of the Germans to civilization.  
Lectures I and II. (*Any five.*)

GEOGRAPHY.—1. How does the Atlantic coast of the United States compare with the Pacific coast in (*a*) curvature, (*b*) elevation, (*c*) indentation?

2. Locate and describe Cuba: (*a*) Position, (*b*) size, (*c*) surface, (*d*) products, (*e*) inhabitants, (*f*) government. Show how a study of this island can be made profitable work for the third grade.

3. What country receives most of the agricultural exports of the United States? Why is this so?

4. How are river deltas formed? Name three river deltas.

5. What are the dykes of Holland? What historical prominence do they have?

6. To what race do the native inhabitants of India belong? To what country are they subject? What is the prevailing religion, and what its doctrines?

7. What rivers drain the lake region of Africa? Which one is of the greatest historical importance, and in what respect does it especially differ from other rivers?

8. What should be the aim of the first three years in geography? Give reasons.

9. What should be the aim of the fourth, fifth and sixth years? Give reasons.  
(*Answer 8 and 9 and any other five.*)

GRAMMAR.—1. So intent were the servants upon their sports that we had to ring repeatedly before we could make ourselves heard.

*a.* Point out the principal elements of the thought expressed by the sentence. Give reasons.

*b.* Point out the principal parts of the sentence. Give reasons.

2. Write sentences containing three kinds of subordinate clauses. Point out and name the clauses.

3. What is an expletive or form word? What is its use in the sentence? Illustrate.

4. Write a sentence containing a noun in the first person, one in the second person and one in the third person. Show how you distinguish.

5. How do you distinguish in use *shall* and *will*? Illustrate in sentences.

6. Punctuate and capitalize: i pity the man who can travel from dan to beersheba and say it is all barren and so it is and so is all the world to him who will not cultivate the fruit it offers

### ANSWERS TO PRECEDING QUESTIONS.

ARITHMETIC.—1. Answer,  $\frac{1}{3}$ .

2.  $\frac{1}{3}$  of 126 = 14;  $\frac{1}{7}$  of 126 = 7 times 14 = 98; if 98 is  $\frac{1}{4}$  of some number,  $\frac{1}{4}$  of 98, or  $32\frac{1}{2}$ , is  $\frac{1}{4}$  of the number; and  $\frac{1}{4} = 4$  times  $32\frac{1}{2} = 130\frac{1}{2}$ . Therefore,  $\frac{1}{3}$  of 126 =  $\frac{1}{4}$  of  $130\frac{1}{2}$ .

3. Answer, 112 rods.

4. Answer,  $66\frac{2}{3}\%$ .

5. As he lost  $\frac{1}{3}$ , \$30 is  $\frac{2}{3}$  of the cost, which is found to be \$36; he therefore lost \$6. In the second sale he gained \$6, or 16%;  $1\% = \$\frac{3}{4}$ ;  $100\% = \$37\frac{1}{2}$ , the cost price of the second cow.  $\$37\frac{1}{2} + \$6 = \$43\frac{1}{2}$ , the selling price of the second cow.

6. Answer, \$21.42+.

7.  $18 \times 1\frac{1}{2} \times 4 \times 8 = 768$ , the number of board feet.

8.  $3 \times 4 \times 5 \times 1728 + 2150.4 = 48.2+$ , the number of bushels in the bin.

9.  $4\text{Km} = 4,000\text{ m}$ ;  $3\text{dm} = .3\text{m}$ ;  $5\text{dm} = .5\text{m}$ ;  $3\text{cm} = .03\text{m}$ ;  $4,000\text{m} + .3\text{m} + 2\text{m} + .5\text{m} + .03\text{m} = 4,002.83\text{m}$ . (This is solved as given; if the proposer meant 3Dm instead of 3dm, the answer would be 4,032.53m.)

SCIENCE OF EDUCATION.—1. The chief arguments generally advanced against compulsory education are:

(a) The assertion that some parents are too poor to provide a suitable outfit of clothes and books for the child, and that the child in some cases can help earn a living.

(b) That such a law is in direct opposition to the right of individual liberty—the right of a parent to provide for his child in accordance with his own judgment as to its needs.

(c) The need for such a law is gradually diminishing, and, in the course of time, the forces of modern civilization will make the attendance at the public schools general, yet voluntary, upon the part of all.

The chief arguments advanced in favor of compulsory education are:

(a) The State must protect itself against ignorance—an element of destruction. *Poverty* is not an argument, for those who are too poor to provide the proper means are always aided, if their needs are made known. Some children are neglected and allowed to grow up ignorant and lawless; a compulsory law would effectually prevent this, and would start such children on the road to good citizenship.

(b) The child should be given the opportunity to make out of himself all that his capabilities will allow.

2. The school should endeavor to educate the moral nature of the

child—(a) Through the habitual example of the teacher, who should not be only a moral man, but also a Christian; (b) through the giving of appropriate examples of moral actions, taken from common life, or from history. These forces will direct his mind into right channels, until in time, he can become his own pilot, through a moral tendency and a disciplined will.

3. The public school should refrain from teaching sectarianism and theology for the following reasons: (a) The school is made up of children representing patrons belonging to various sects, and those pupils and patrons not in accord with particular tenets taught would be justified in protesting; (b) the school is not created for imparting instruction in theological doctrines.

4. The school should do what it can to promote the physical development of the child, (a) because, upon a strong, healthy body depends the effective working of the powers of the mind; (b) because the future welfare of the child depends chiefly upon his condition as regards the health of his body.

5. Rational memory recalls logical dependencies made up of thoughts and their relations; verbal memory recalls simply words, unconnected with any complete idea and having no relation with each other.

6. Arithmetic, history and geography.

7. It adds to the interests, to the knowledge of the pupil, to his vocabulary and to his power of literary interpretation.

8. Some of the excellencies of Indiana's school system are:

- (a) The office of county superintendent.
- (b) The selection of teachers by trustees.
- (c) The township high school.
- (d) The institution of the Reading Circle for teacher and for pupil.
- (e) Uniform examination questions for teachers' license.

Some of the defects of Indiana's school system are:

- (a) The lack of uniformity in the length of school terms.
- (b) Lack of sufficient strictness in the matter of teachers' qualifications as to moral character, personal habits, and direct influence over pupils.
- (c) The deplorable disadvantages connected with the country school—the single room, the great number of classes per day, and the short period for each recitation.
- (d) Insufficient county supervision.
- (e) No special or definite qualifications are required for school officials.
- (f) The plan for selecting text-books does not get the best text-books.

READING.—1. By the nature of literature is meant its "*productive energy*," its capability of pleasing the sensibilities, of informing the intellect, or of moving the will, and as such it appeals to life in all its phases.

2. The nature of any subject of study is the determining factor as to the method of teaching it, for the different phases, or characteristics of that nature and their relations to each other and to kindred lines of thought constitute the subject matter.

3. By the theme of a discourse is meant its central idea, to the evolution or presentation of which, all the other ideas in the discourse contribute.

4. By the form is meant the embodiment. It is the body through which the soul (theme) is manifested. It is the person, the object, or the scene, which the writer uses to express his phases of human life.

5. In prose, or didactic discourse, the writer "seeks to be true to the object presented:" his mind must conform to the facts as they are. In a description he must be true to detail. In poetry, the writer uses the object to express a law of life, makes it conform to him, writes that about it which appeals to human experience.

HISTORY.—1. The great compromises with slavery were:—

(a) The one in the Constitution in regard to the representation allowed to the South for three-fifths of her negro slaves. 1. The consideration for this concession was that direct taxes should be apportioned according to numbers (the South counting in three-fifths of her negro slaves). "This would tax the southern white more than the northern white, in exactly the same proportions that he held greater political influence." This would apparently equalize the interests of the sections. But it so happens that direct taxes are very unpopular and have very rarely been laid—only five times. All our taxes are indirect. The South, therefore, has practically never been called upon to pay anything for this political preponderance.

(b) The one in the Constitution which forbade the federal prohibition of the slave trade until 1808, in consideration of new commercial facilities and the right to levy a small tax on each slave imported. "It was also a part of this arrangement that slaves escaping from one state into another should be given up to their masters on demand."

(c) The Missouri Compromise (see text-books).

(d) The Compromise of 1850 (see text-books).

2. Faithful in all the relations of life, pure, upright, diligent, discreet, disinterested, benevolent, Madison possessed those traits to which old age always gives lustre. Well deserving of the nation, he had attained all the honors the nation could bestow, and had done filial service in return. His faults were those of a prudent rather than a zealous or daring executive; responsibility rested uneasily upon his shoulders, for he had been bred a counsellor, and as president, he could not stand firmly against opposition. His administration was weakest where the pressure came upon executive discretion, and strongest where its course was dictated by the popular wishes, of which Madison had always a delicate perception. Conscientious as he was docile and capable, even weakness like this could not ruin the public interests committed to him, for discipline brought correction, and though a president of accomodating opinions, perhaps, his opinions were accomodated, nevertheless, to the times. Madison could never go far wrong, for he never went counter to the senses of those he governed, but in the war of 1812, he seemed less a preceptor and guide than the instrument of those who took up arms so boldly to vindicate American honor; and hence the American people remembered his presidency in after years less for his achievements than their own.

3. Fertility of invention in agricultural machinery in the United

States. Causes of: (*a*) the immense sections suitable for tilling and the demand for staple productions of the soil have put genius to work to evolve implements that would sow, tend, and reap areas many times as large as had been farmed before; (*b*) the spirit in man that is always on the alert for the improvement of his condition. Effects of: (*a*) the production of many implements remarkable for their smooth and effective work; (*b*) the opening up of vast areas of farming lands in the great west; (*c*) the building of railroads; (*d*) decrease in price of agricultural products; (*e*) and by some it is alleged that improved machinery has increased the number of idlers.

4. (1.) The establishment of, (*a*) the county superintendency; (*b*) the reading circle; (*c*) the system of uniform examination questions; (*d*) the township high school; (*e*) gradation in the country schools; (*f*) a uniform course of study for the public schools; (*g*) of the State normal school; (*h*) of a compulsory education law; (2) the building of better school houses and supplying them with better outfits.

5. Some of the arguments by which the southern people justified slavery were—(*a*) that the word *slave* simply meant *servant*; that such an institution as slavery in the sense commonly understood by the abolitionists did not exist in the south; (*b*) that their system, in time, transformed pagan savages to civilized christians, happy in themselves and useful to the world. The fruits of the system are beneficent to all; (*c*) what is said concerning its evils may be true or false, but the remedy demanded by the abolitionists involves a vastly greater evil, to the slave, to the master, to our common country, to the world. Liberty would be a curse to them. They are not yet ready for it. They are fast rising in the scale of intelligence and civilization, and the time may come when they will be capable of enjoying the blessings of freedom and self-government. (*d*) Wherever the emancipation of negroes has occurred, as in a few islands contiguous to our shores, they have rapidly retrograded to the state of pagan savages. The value of property in those islands has rapidly depreciated, their production has vastly diminished, and their commerce and usefulness to the world are destroyed. (*e*) The Apostle, in the Epistle to Timothy, has not only explicitly laid down the law on the subject of slavery, but has with prophetic vision, drawn the exact portrait of our modern abolitionists. (*f*) The products of slave labor are in such universal demand, that it is impracticable, in the existing condition of the world, to overthrow the system and besides, the free negro has demonstrated his inability to engage successfully in cotton culture.

SCIENTIFIC TEMPERANCE.—1. "Any substance, whether food, drink, or medicine, that has the power to make one feel stronger temporarily, without adding to the permanent strength of the body, is a *stimulant*." "Specifically, in physiology, an agent producing a quickly diffused and transient increase of vitality and energy in the heart and arteries." "Any agent efficacious in exciting organic action in the human system." The most common are alcohol, ammonia, and camphor. In some cases their use is to be commended.

2. A food is any substance that, being taken into the body of animal or plant, serves, through organic action, to build up normal structure or

supply the waste of tissue. Alcohol can not be so classed, for it neither builds up normal structure nor supplies the waste of tissue.

3. The heart's action is increased in frequency. The continued use of alcohol causes a fatty degeneration of various organs, the heart being among the number. It acts in the line of depressing and paralyzing the heart, and cannot be regarded as a heart stimulant. (Adv. Phys.) The habitual use of alcoholic drinks may lead to serious disease of the heart, or at least to a considerable weakening of its power. The smaller blood vessels or capillaries become paralyzed and, as a consequence, distended. Its first effect is to quicken the function of the organs of circulation, this is soon followed by a decrease in the force of the heart.

4. These organs are affected directly through contact with the alcohol; and indirectly through the nerve centers.

5. Under circumstances attended with intense pain. (See p. 299 in Adv. Phys.)

6. Its first effect is quieting in its nature; in a short time it causes a change in the healthful action of the nerve centers, resulting in disturbed functions of the digestive organs of the liver, of the skin, and in the deterioration of the muscular tissue.

7. He does not, for alcohol by reducing the function of the blood corpuscles, reduces the generation of heat.

GEOGRAPHY.—1. Along the Atlantic coast, etc. (See p. 261, April JOURNAL.)

2. (See Geog.) The study of Cuba can be made profitable work for the third grade only in a few points, such as its products, location, and the fact that it is an island.

3. Great Britain, because it is conveniently situated for commerce, and does not raise agricultural products extensively; also, our relations with that country are very intimate, thereby making an exchange of products mutually helpful.

4. (See Geog.)

5. (See Geog.) The most ancient accounts of Holland represent it as an extended swamp, alternately covered and abandoned by the waters of the ocean. Even in the first century of the Christian era, it appears not to have been destitute of inhabitants, who subsisted on the produce of the sea, and endeavored to fix their habitations on any spot of ground which was left uncovered by the waves. It is perhaps impossible to ascertain the period at which they begun to protect themselves from inundations by the erection of dikes; but for many centuries they have maintained a successful contest with the ocean, which has ended in the country being brought to its present state of high cultivation, and comparative safety. A great part of Holland is calculated to be between twenty and forty feet below high water mark on the adjoining coast, yet the inhabitants seem nevertheless to live without fear. At various times, however, the sea has burst its barriers, and on these occasions the effects have been most disastrous. In connection with the building of dikes, the importance of draining the land by means of canals and ditches would naturally suggest itself; and accordingly, to such an extent has this improvement been carried, that the country is now inter-



sected with them in every direction. The canals are indeed innumerable, and of great utility in facilitating internal trade, and in traveling; and, being lined with rows of trees, they tend to beautify the country, which is naturally flat and uninteresting. The country is so flat, that to those approaching it along the rivers, and some parts of the coast, the trees and spires seem to rise out of the water.

6. "The inhabitants of India are in fact a very heterogeneous people; though they are generally considered as belonging to the Caucasian variety of the human race." They are subject to Great Britain. "Broadly speaking, it may be said that at least nineteen out of every twenty people in India are either Hindus or Mohamedans, and that there are seven of the former to two of the latter." Hinduism is Brahmanism modified by an admixture with Buddhism and other Indian beliefs and philosophies. The chief tenet of Brahminism is the belief in a One First cause acting through the triad—Brahma, the creator, Vishnu, the preserver, and Siva, the destroyer. The Buddhists do not believe in a personal God, but hold that Buddha, or the principle of a divine intelligence, has become incarnate in certain illustrious and holy men. It "preaches the final salvation of man from the miseries of existence through the power of his own self-renunciation."

7. The Nile, the Congo and the Zambezi. The Nile is of the greatest historical importance, and it differs especially from other rivers in the fact that for 1,500 miles from its mouth it does not receive a single tributary.

8. The fundamental ideas of form, size, color, place, distance and direction should be taught as a foundation, for they are the elements of geographical concepts. These can be learned from object lessons, and from "field" lessons. All the prominent facts in the locality of the home or school should be learned as a basis for knowledge of other regions or countries. Many points in regard to animals, products, temperature, etc., are suitable for the first three years. The names of the forms of land and water should be learned. The elementary ideas of drawing; these applied to sketches of the top of a table, of the school floor, of the school yard, etc., should be included. (See State Manual.)

9. See State Manual.

GRAMMAR.—1. (a) The *thought subject* is the idea represented by the "servants," because it is the idea about which something is expressed. The *thought predicate* is the idea represented by "*were so intent upon their sports that we had to ring repeatedly before we could make ourselves heard*," because it is asserted of the thought subject. The *thought relation* is one of affirmation; this is *self-evident*. The words representing the thought subject constitute the *subject* of the sentence. The words representing the thought predicate constitute the *predicate* of the sentence. The *copula* of this sentence is "were;" it expresses the thought relation and forms part of the thought predicate:

2. (a) "I believe that he is an honest man;" here the subordinate clause is *substantive* in character; (b) "I know the man who stole the money;" here the subordinate clause is *adjective* in character; (c) "The agent came after you left;" here the subordinate clause is *adverbial* in character.

3. An expletive is a word which expresses no part of the thought of a sentence; the sentence is full (*plenus*) enough with it out (*ex*), as far as expressing the thought is concerned. Its use in a sentence is to bring about a more desirable arrangement of the words, an arrangement which will intensify the thought; as, "*There* are no noble men but Romans."

4. I, John, saw these things. John, did you see these things? John saw these things. (See grammar.)

5. The original meaning of "*shall*" was "to owe," "to be obliged"; and of "*will*" to wish. *Will* implies a reference to the will of the subject, and *shall* implies obligation or compulsion; as (a) I will follow him to the end; (b) he shall be brought to justice. In the second and third persons *will* expresses simple futurity; as, (a) if you visit him, you will find him busy; (b) I think it will rain to-day. In the first person, *shall* is used to express futurity; as, I shall read awhile. In the second and third persons *shall* expresses (a) a promise, (b) a command, or (c) a threat; as (a) you shall have these books to-morrow; (b) thou shalt not steal; (c) he shall be punished for this.

6. I pity the man who can travel from Dan to Beersheba and say, "It is all barren." And so it is, and so is all the world to him who will not cultivate the fruit it offers.

HISTORY OF CIVILIZATION.—1. Civilization may have two meanings (a) the *condition* of a people at any certain time; (b) the *force* under the influence of which people are improving, this force being the union of several forces—emanating from the state, society, the church, the home, the school, industry, art, science, literature, and philosophy.

Some of the tests of civilization are (a) *progress*, intellectually and morally; (b) a happy social state; (c) liberty of the citizen; (d) extensive commerce; (e) good roads; (f) good schools; (g) elevation of woman; etc.

2. Civilization in general is the combined result of all the causes and forces—intellectual, moral, political, social, industrial—which, working in the past have made man and society what they are to-day. A special civilization is any advanced condition of a people in a special phase of life—for example, industrial life—; the same people being perhaps in a semi-barbarous state as regards other phases of life.

3. In the civilization of the ancient world, society for the most part, was under the influence of one single principle, which universally prevailed and determined the character of its institutions, its manners, its opinions,—in a word all its developments. In the civilization of the ancients, one ever prevailing character of unity, seemed to govern and determine all things. In the civilization of modern Europe we see all the principles of social organization existing together within it; powers temporal, powers spiritual, the theocratic, monarchic, aristocratic, and democratic elements, all classes of society, all the social situations are there embodied.

In what relates to form and beauty of art, modern Europe is very inferior to antiquity; but if we look at her literature as regards depth of feeling and ideas, it will be found more powerful and rich.

4. After the City Republic had conquered much of the world, the task

came for her to rule it. But the administrative organization and the military system connected with it were too heavy and cumbersome, the distant parts of the government were too difficult to reach, the peoples were too varied in their wants and beliefs—for all the provinces to be held under one power. All these internal causes brought about a strong tendency to dissolution, which was made a fact, by the external foes—the Barbarians.

5. The chief bequests of Rome to civilization were :—(a) the system of municipal corporations, its habits, its regulations, its principles of liberty ; (b) the idea of absolute power, the principle of order and the principle of servitude ; (c) the organization and development of the Christian Church ; (d) the Latin language.

6. The early church being a society firmly established, under a powerful government and rules of discipline survived the dissolution of the empire, and became the connecting link—the principle of civilization between the Roman and the barbarian world. By it the barbarian was made better. It also through its organization saved Christianity from banishment from that part of the world.

7. Some of the contributions of the Germans to civilization were: (a) the sentiment of personal independence, the love of individual liberty; (b) the fealty, the fidelity which united individuals, without apparent necessity, without any obligations arising from the general principles of society—a kind of devotedness of man to man. (c) A high regard for woman (see *Adams*.) (d) Ideas of local self government and representative government (see *Adams*.)

PHYSIOLOGY.—1. To withstand severe strains the ends of many bones are enlarged, and covered with cartilage; they are hollow cylinders, the best form a given amount of material may have to resist strains.

2. The voluntary muscles receive nerves chiefly from the cerebro-spinal system; the involuntary muscles receive nerves from the sympathetic or ganglionic system. This difference in connection with the nervous system causes a difference in the effects from stimuli, the effect on unstripped muscular fibre manifesting itself more slowly, but extending over a greater region, than the effect on striped muscular fibre. The nerve entering a voluntary muscle ends in an *end-plate*, a clump of richly nucleated protoplasm of an irregular oval form, and situated on the muscular fibre, within the sarcolemma. The nerve entering an involuntary muscle penetrates the muscular fibre-cell, enters the nucleus, and terminates in the nucleolus.

3. Some medicines containing the active principles of the digestive juices, for example, *pepsin*, are used to assist digestion.

4. The liver secretes the bile, and excretes cholesterolin from the blood, and its cells serve to store up, in the form of a kind of animal starch, called glycogen, excess of starchy or sugary food absorbed from the intestine during the digestion of a meal, and then to gradually dole this out to the blood for general use by the organs of the body until the next meal is eaten. The liver also acts upon peptones so as to render them capable of assimilation.

5. The arteries are highly elastic and extensive; they have rings of muscular tissue in their walls, and when the muscle contracts, the bore of the artery (and consequently the amount of blood which flows through it)

is diminished. When the muscle relaxes, the bore of the artery is increased and more blood passes along it to the capillaries in which it ends. Except the pulmonary artery and the aorta, which have semi-lunar valves, arteries have no valves. Most veins, on the contrary, contain many valves formed by pouches of their lining. The wall of an artery consists of several coats—an outer one of connective tissue; next to this the yellow elastic coat; within this the muscular coat; internal to the muscular coat is the elastic fenestrated coat; lastly, the coat formed of the endothelial cells, which form the free surface over which the blood flows. The wall of a vein possesses the same number of coats as that of an artery, but the coats are thinner. Veins are also extensively provided with valves, which are absent from the arteries except at the mouths of the aorta and the pulmonary artery.

6. The seat of voluntary action in the brain is the cerebellum and the medulla oblongata.

7. From the abdominal aorta, a renal artery enters the inner border of each kidney, to break up within into finer branches, ultimately ending in capillaries. The blood is collected from these into the renal veins, one of which leaves each kidney and opens into the inferior vena cava, which carries it, after having lost water and urea in the kidneys, back to the heart.

8. In the general structure of a tooth there is a *crown*, the visible portion; the *root* or *fang*, imbedded in the jaw-bone; the *neck*, or the part clasped by the gum. A tooth is composed, (a) of *enamel*, the outside layer of the crown; it is white, glistening, and very hard; (b) of *cement*, the outside layer of the neck and fang; (c) of *dentine*, the substance enclosing the pulp; (d) of the *pulp*, the central substance consisting of minute blood vessels and nerve filaments.

10. The process of osmosis may be illustrated by taking a solution of sugar and a solution of salt, and arrange so that they will be separated only by a moist animal membrane. After a time it will be found that some salt has got into the sugar solution, and also some of the sugar into the salt solution, although there are no visible pores in the partition. Such an interchange is said to be due to *dialysis* or *osmosis*, and if the process were allowed to go on for some hours the same proportions of salt and sugar would be found in the solutions on each side of the dividing membrane.

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SUPPOSE.—Suppose that a farmer raises 1,000 bushels of wheat a year, and also sells this to 1,000 persons in all parts of the country, a great portion of them saying, "I will hand you a dollar in a short time." The farmer does not want to be small and says "all right." Soon the 1,000 bushels are gone, but he has nothing to show for it, and realizes that he has fooled away his whole crop and its value. To him is due a thousand little dribblets, consequently he is seriously embarrassed in business because his debtors, each owing him one dollar, treat it as a small matter and think it would not help much. Continue this kind of business year in and year out as the publisher does, how long will he stand it? A moment's thought would convince any one that a publisher has cause for persistent *dunning*.

**MISCELLANY.****COUNTY SUPERINTENDENTS OF INDIANA.**

ELECTED JUNE 7, 1897, FOR TWO YEARS.

COUNTIES.	NAME.	ADDRESS.
Adams .....	Irwin Brandyberry.....	Decatur.
*Allen .....	F. J. Young.....	Fort Wayne.
Bartholomew .....	James H. Clark.....	Columbus.
Benton .....	L. A. McKnight.....	Fowler.
†Blackford .....	M. H. McGeath.....	Hartford City. (Contest.)
Boone .....	Richard H. Harney.....	Lebanon.
Brown .....	Cornelius Campbell.....	Ramilton.
Carroll .....	Isaac F. Myer.....	Flora.
*Cass .....	J. F. Cornell.....	Logansport.
Clark .....	Samuel S. Scott.....	Charlestown.
*Clay .....	W. H. Chillson.....	Clay City.
*Clinton .....	James H. Grover.....	Frankfort.
Crawford .....	Charles A. Robertson.....	English.
*Davies .....	William A. Wallace.....	Washington.
*Dearborn .....	S. K. Gold.....	Lawrenceburg.
Decatur .....	Elmer C. Jerman.....	Newpoint.
Dekalb .....	Henry E. Coe.....	Auburn.
Delaware .....	Charles Van Matre.....	Muncie.
*Dubois .....	Geo. R. Wilson.....	Jasper.
*Elkhart .....	Geo. W. Ellis.....	Goshen.
Fayette .....	Calvin Ochiltree.....	Connersville.
Floyd .....	Levi Scott.....	New Albany.
*Fountain .....	Grant Gossett.....	Covington.
*Franklin .....	William H. Senour.....	Brookville.
Fulton .....	William S. Gibbons.....	Rochester.
Gibson .....	John T. Ballard.....	Princeton.
Grant .....	Alexander Thompson.....	Marion
Greene .....	Harvey E. Cushman.....	Newberry.
*Hamilton .....	Ellis A. Hutchens.....	Noblesville.
Hancock .....	Lee O. Harris.....	Greenfield.
Harrison .....	Amzi Weaver.....	Corydon.
*Hendricks .....	James D. Hostetter.....	Danville.
Henry .....	William F. Byrket.....	New Castle.
*Howard .....	Geo. W. Miller.....	Kokomo.
*Huntington .....	Henry D. Shideler.....	Huntington.
Jackson .....	J. E. Payne.....	Brownstown.
Jasper .....	Lewis H. Hamilton.....	Rensselaer.
Jay .....	Lewis Crowe.....	Pennville. (Contest.)
Jefferson .....	Geo. S. Taylor.....	Madison.
Jennings .....	M. W. Deputy.....	Vernon.

†Johnson	E. L. Hendricks	Franklin.	
Knox	John L. House	Vincennes.	(Contest.)
*Kosciusko	Geo. W. Worley	Warsaw.	
*LaGrange	Enoch G. Machan	LaGrange.	
*Lake	Frank E. Cooper	Crown Point.	
*LaPorte	Chas. A. Zigler	LaPorte.	
Lawrence	W. E. Stipp	Mitchell.	
Madison	Lawrence McTurnan	Anderson.	
Marion	W. F. Landes	Indianapolis.	
Marshall	Geo. D. Marks	Plymouth.	
Martin	Elijah McFarland	Shoals.	(Contest.)
Miami	Ellis H. Andrews	Denver.	
Monroe	Thomas J. King	Bloomington.	
Montgomery	Ward B. Walkup	Crawfordsville.	
Morgan	William O. Baker	Martinsville.	
*Newton	W. W. Pfrimmer	Kentland.	
*Noble	Edwin L. Adair	Albion.	
Ohio	Eugene S. Espey	Rising Sun.	
*Orange	Orville Apple	Paoli.	
*Owen	Calvin F. McIntosh	Spencer.	
Parke	Jesse Neet	Rockville.	
Perry	Logan Esarey	Cannelton.	
Pike	Wm. S. Corn	Augusta.	
*Porter	Arthur A. Hughart	Valparaiso.	
*Posey	Charles Greathouse	Mt. Vernon.	
*Pulaski	John H. Reddick	Winimac.	
Putnam	Samuel A. Harris	Greencastle.	
Randolph	Charles W. Paris	Farmland.	
Ripley	Charles S. Royce	New Marion.	
Rush	Abraham L. Gray	Rushville.	
Scott	Elijah A. Gladden	Scottsburg.	
Shelby	J. W. Barlow	Shelbyville.	(Contest.)
Spencer	Aquilla C. Huff	Rockport.	
Starke	W. A. Faust	Knox.	
St. Joseph	Wm. Clem	South Bend.	
Steuben	Homer Dilworth	Angola.	
*Sullivan	Richard Park	Sullivan.	
Switzerland	David N. Hayden	Vevay.	
*Tippecanoe	John M. Sullins	Lafayette.	
*Tipton	A. H. Pence	Tipton.	
*Union	C. W. Osborne	College Corner, Ohio.	
Vanderburgh	Joseph F. Enslee	Evansville.	
Vermillion	Elbert E. Helt	Perrysville.	
Vigo	Chas. F. Grosjean	Terre Haute.	(Contest.)
*Wabash	John N. Myers	Wabash.	
Warren	Allison E. Wilson	Williamspport.	
Warrick	James R. Wilson	Boonville.	
Washington	Sylvester H. Hall	Salem.	

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*Wayne .....	W. E. Wineburg.....	Richmond.
*Wells .....	Robt. W. Stine.....	Bluffton.
White .....	Thos. S. Thornburg.....	Monticello.
Whitley .....	Burnside Clapham.....	Columbia City.

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\*Re-elected.      †No election.

#### NOTES.

The above list is printed as reported by the county auditors to the State Superintendent. It will be noted that there are five contested cases. The superintendent is of the opinion that three of these contests will result in leaving the old superintendents in office.

The number of changes is greater than ever before. This is accounted for by the fact that when the former trustees were elected there was an unprecedented "landslide" in favor of the Democrats, and when the present trustees were elected, the "landslide" was in favor of the Republicans.

W. W. Pfrimmer, of Newton county, was re-elected on the 263d ballot, after two-days' balloting. There are ten trustees in this county and Mr. Pfrimmer had, from the start, five of them and the auditor on his side.

Sylvester H. Hall is the first Republican superintendent Washington county has ever had. He secured his party nomination over seven competitors after 116 ballots.

The trustees in Putnam county remained in session till nine o'clock at night and on the 79th ballot elected Samuel A. Harris.

E. H. Hutchins, of Hamilton county, was elected for a seventh consecutive term.

Capt. Lee O. Harris, the superintendent of Hancock county, has been a teacher in the county for thirty-eight years, except while he was in the army. Captain Harris is one of Indiana's best poets and is a botanist of high rank.

Jno. O. Lewellen, of Deleware county, after serving fourteen years, declined to be a candidate and Chas. Van Matre was elected his successor on the 68th ballot.

It required 124 ballots to elect L. J. McTurnan superintendent of Madison county. He is a graduate of the State Normal class of '97, is only twenty-four years old and the first Republican superintendent the county has ever had.

It required 72 ballots to elect Alex. Thompson superintendent of Grant county.

E. G. Machan has served eight full terms and has been elected for a ninth. He is the oldest superintendent on the list. C. W. Osborn lacks one month of being as old as Mr. Machan. He has been elected for a ninth term, but his first term lacked one month of being full. Frank E. Cooper has been elected for a ninth term, but his first term was ten months short.

Among the superintendents there are three Wilsons, two Scotts, two Harrises, but not a Smith, Jones or Brown.

## MEETING OF THE COUNTY SUPERINTENDENTS.

The county superintendents held their thirty-fourth semi-annual meeting in Indianapolis, June 16 and 17. The meeting was one of the largest—probably the largest—ever held, about eighty out of the ninety-two superintendents being present. Most of the superintendents being new, they were specially interested in getting acquainted, and in learning what was to be done.

George R. Wilson, of Dubois county, was president, and made an excellent presiding officer.

The first topic discussed was "Nature Work in the Grades." This was treated by Mrs. E. E. Olcott in a highly satisfactory manner. The subject was discussed by E. L. Hendricks, Wm. Wallace and George W. Miller. All agreed that nature work could be successfully done in all the grades of the schools, and that it should be done by studying the objects themselves. It is always better to study the object than to study about it. Books should simply be used as helps.

"The Most Important Duties of the County Superintendent" was the subject of a paper by W. H. Senour, and the subject was discussed by E. A. Hutchens and F. J. Young. Mr. Senour insisted that the most important duty of the superintendent is to do his duty. This is not always an easy thing to do. The superintendent should use great care, good judgment and firmness in issuing licenses, because the teachers make the schools. A superintendent who does not grow himself can not expect to have his teachers grow. If he can not be a leader he should resign. A superintendent should go to a school room to stimulate, to suggest, to help rather than to criticise. He should bear himself in such a way that both pupils and teachers will be glad to see him.

*Arithmetic* was discussed in a most practical and helpful way by Dr. R. J. Alely, of the State University. Dr. Alely thinks that the tendency is to make things too easy for children. He insists that they can not play themselves into a thorough knowledge of the multiplication table. He also insists that too much philosophy and "reason" is put into the lower grades. Children should first be taught *to do the thing*, and do it promptly and accurately, and later the reasoning will come easily. W. F. L. Sanders heartily seconded Dr. Alely's position.

"The Compulsory Education Law" was discussed by E. P. Bicknell, secretary of the State Board of Charities and State Superintendent D. M. Geeting. Mr. Bicknell has had large experience with the criminal classes and insists that it is settled beyond dispute that ignorance and crime go together. He insists that seventy-five per cent. of the men in the penitentiary can not read with any degree of ease to themselves. He expects this law to do much in reducing the number of criminals in the State. He also says that county superintendents will have more to do with making the law effective than any other class of people. He advises great care in the selection of truant officers and great care and good judgment in enforcing the law.

Mr. Geeting explained in detail the provisions of the law and answered numerous questions. He says that according to the ruling of the attorney



general, no county, including the cities, can have more than five truant officers, and he advised that in starting out the fewest possible number should be appointed, so as to keep down expense. He said that any of the smaller counties should start with but a single officer. So far as could be learned from the discussion, not a superintendent was opposed to the law and all seemed desirous to enforce it in the most judicious way.

Mrs. McRea, president of the Reading Circle Board, made an address in behalf of the Reading Circle. She spoke especially for the Y. P. R. C. Last year the membership reached over 200,000 and the number of books sold reached over 40,000.

The following officers were elected :—

President—E. J. Machan, of LaGrange.

Vice-President—Wm. Wallace, Daviess.

Secretary—W. E. Wineburg, Wayne.

Treasurer—Robt. W. Stine, Wells.

Committee on Bi-Monthly Examinations :—

E. S. Hendricks, Orville Apple, H. D. Shideler, Charles Van Matre, Charles Greathouse.

Committee on Diplomas :—W. A. Senour, E. C. Jerman, G. W. Miller, R. W. Stine.

A very decided sentiment was expressed to the effect that the questions now sent out by the State Board for the examination of teachers can not be answered in a single day. A plea was made for more time or fewer questions.

#### LIST OF YOUNG PEOPLE'S READING CIRCLE BOOKS FOR THE YEAR 1897-8.

FOR SECOND YEAR PUPILS.		Prices by Mail.	Prices by Freight or Express.
Seed Babies by Worley.....		\$0.27	\$0.24
Some of our Friends by Welsh.....		.25	.20
Stories of Bird Land.....		.25	.20
FOR THIRD YEAR PUPILS.			
A Child's Garden of Verses by Stevenson.....		.75	.70
Revolutionary Pioneers for Young People.....		.32	.28
All the Year Round-Spring by Strong.....		.34	.28
FOR FOURTH AND FIFTH YEAR PUPILS.			
Three Colonial Boys by Tomlinson.....		1.04	.90
The Patriot School Master by Butterworth.....		1.02	.90
The Making of the Ohio Valley States by Drakes.....		.95	.85
The Young Reporter by Drysdale.....		1.00	.88

## FOR SIXTH AND SEVENTH YEAR PUPILS.

Crowed out o' Crowfield by Stoddard.....	1.02	.90
Boy Travelers in China and Japan by Knox.....	1.10	.98
Midshipman Farragut by Barnes.....	.70	.62

## FOR EIGHTH AND ADVANCED YEAR PUPILS.

Shakespeare the Boy by Rolfe .....	.95	.85
In Birdland by Keyser .....	.74	.67

EXPLANATION :—The first column above shows the prices by mail. We are not responsible for books sent by mail. We prepay transportation on all books sent by express or freight. If you have no express office in your town, please give the express office to which you prefer to have your books sent. Send draft, money order, or money in registered letter. However, the purchaser must pay the cost of remittance. Do not send personal check. Address George F. Bass, Mgr., 103 Commercial Club Building, Indianapolis, Ind.

## STATE LICENSES.

The following is a list of the successful applicants for professional and life State licenses for 1897, dated May 14.

## PROFESSIONAL LICENSE.

Addleman, Frank E., Lynn.	Martin, Jacob, Plymouth.
Beldon, Alfred H., Crothersville.	Mitchell, John J., Frankfort.
Bunnell, Clark, Wanatah.	Moore, C. Bell, Lawrenceburg.
Campbell, John M., Frankfort.	Morgan, Wilbur F., Ambia.
Charles, Herbert, Economy.	Mortself, J. Benj., Frankfort.
Delany, Faustin S., Wilberforce, O.	Mowrer, Frank K., Warren.
Evans, Harry, West Lebanon.	Rizer, Eldredge B., Wolcott.
Fish, Geo. R., Rochester.	Rogers, George E., Rose Lawn.
French, James D., Whiting.	Shafer, Chas. E., Spiceland.
Gardner, Claribel, Lotus.	Stanley, Thad., Tillman.
Gardner, Edward, Lotus.	Tapy, Geo. H., South Whitley.
Gause, Frank A., Bloomington.	Thomas, C. E., Bloomington.
Hanson, Samuel C., Williamsport.	Troyer, Daniel J., Goshen.
Hiatt, Amos L., Kirklin,	Van Gorder, Wm. B., Knightstown.
Kyger, Samuel P., Frankfort.	Wertz, Samuel, Columbus.

West, Chas. H., Fowler.

## LIFE STATE LICENSE.

Bowers, Wm. O., Tabor.	Kimmel, Chas. W., Kendallville.
Carroll, John H., Grand View.	Martin, A. E., West Indianapolis.
Cooper, Homer H., Knightstown.	Payne, W. V., Harrodsburg.
Danglade, Ernest, Vevay.	Rothert, M. W., Degonia Springs.
Hamilton, W. A., Hebron.	Searle, M. J., Nineveh.

Wyandt, Jacob W., Angola.

*The Waterloo High School Exponent* for June contains all the essays of the graduating class. They make good reading.

THE Pulaski County Normal will open in Winamac, July 12 with County Superintendent J. H. Reddick and A. T. Reid in charge.

WABASH graduated from its high school this year thirty-eight. Adelaide Baylor is principal and M. W. Harrison is superintendent.

GAS CITY graduated its first class this year—seven in number. W. O. Warrick is superintendent and Edith E. Warrick is principal.

TIPTON graduated a class of twelve. The *Tipton Times* speaks in very high terms of the work done for the schools by Supt. F. L. Jones.

STATE SUPERINTENDENT GEETING gives the enumeration of school children in the State as 749,860, an increase *over* last year of 16,134.

ACCORDING to the report of County Superintendent Greenstreet, 85% of the teachers of Henry County taught music as a branch the past year.

"WHAT is vivisection and what can I do to help the crusade against it?" For information, address Anti-Vivisection Society, 15 Court Square, Boston.

STATE SUPERINTENDENT D. M. GEETING has sent out a circular of instruction in regard to the compulsory education law. It can be had for the asking.

MARTINSVILLE graduated a class of eight and the class address was by Pres. W. W. Parsons. W. D. Kerlin is superintendent and W. F. Clark is principal.

WEST LAFAYETTE had a graduating class of nineteen this year and fifteen of them will enter Purdue University next September. Horace Ellis is superintendent.

THE Covington high school held this year its seventeenth annual commencement with thirteen graduates. Will P. Hart is superintendent and Edna Hays is principal.

THE Richmond high school sent out this year a class of forty-three—the largest in the history of the school. D. A. Ellabarger is principal and T. A. Mott is superintendent.

NEW CARLISLE high school sent out a graduating class of eight boys and one girl this year. D. A. Sharp, the present superintendent has been re-elected for his fourth year.

FAIRMOUNT ACADEMY at its eleventh commencement granted diplomas to seven. The past year has been the most prosperous in the history of the school. E. O. Ellis is principal.

NEW LONDON sends out a sixteen-page catalogue of its high school. This place has for many years been noted for its educational spirit. W. E. Howard is in charge of the schools.

THE WATERLOO high school sent out this year, ten graduates. It follows the good old plan of allowing each graduate to speak at commencement. H. H. Keep is superintendent and J. O. Bonnell is principal.

LIMA.—Fourteen students completed the high school course at Lima this year. This is a large number for a place of this size. H. S. Gilhams is superintendent and F. G. Smeltzly is principal of the high school.

THE State Normal School graduated this year seventy-eight and granted diplomas to thirty-four of the class of '95. Nicholas Murray Butler made the address and Governor Mount was present and made a short address.

SPICELAND ACADEMY has celebrated its twenty-eighth commencement and sent out a class of fourteen. The school has ranked high for good honest scholarship. The principal, Geo. W. Neet, made the class address.

INDIANAPOLIS BUSINESS UNIVERSITY sent out this year from its various departments a class of seventy-five. The annual address was made by chief justice of the appellate court, U. Z. Wiley. E. J. Heeb is at the head of the school.

THE Bay View Summer School has grown to be one of the leading summer schools of the country. Its instructors are all eminent in their specialties. For particulars see May JOURNAL or address J. M. Hall, superintendent at Bay View, Mich.

ANTIOCH COLLEGE at Yellow Springs, O., whose first president was Horace Mann, is still doing good honest work and carrying out the original charter and design of the institution. For catalogue and information, address the president, D. A. Long.

THE Vincennes high school sent out this year sixteen graduates. A. C. Yoder is principal and A. E. Humke is superintendent. Vincennes has a high school for colored people exclusively. This year it sent out nine graduates. E. W. Clark is principal.

THE MADISON schools are giving special attention to language lessons based on nature work. Children are led to observe and then describe what they see. We have before us an essay on "The Blood Root," written by a fifth grade pupil that is certainly creditable.

EVANSVILLE sends out a revised course of study for its high school. It is very complete and contains valuable suggestions. It makes a pamphlet of nineteen pages. The new high school building is a beauty. Robert Spear is principal and W. A. Hester is superintendent.

*The Young People's Journal* will begin its fifth year with its September issue. This is one of the best young people's papers in the country. It has been improving ever since it started. Mr. Geo. F. Bass, the editor and proprietor, could not make a poor paper if he should try. For details see advertisement on another page.

HARTFORD CITY will erect three new school buildings this summer [one to take the place of one recently destroyed by fire]. Three years ago the schools of this place employed seventeen teachers, next year they will employ thirty. The high school has grown from an enrollment of forty-seven to one hundred-two. Frank M. Beard is superintendent.

JEFFERSONVILLE has closed one of its most successful school years. The high school graduated nineteen—the largest in its history. Superintendent Stultz leaves the schools at the close of his eighth year and leaves them in first-class working order. There is no doubt but that these schools made steady and gratifying advancement under the superintendence of Superintendent Stultz.

MARTINSVILLE.—The schools here have been closed after a very prosperous year's work. This was Superintendent Kerlin's first year. The enrollment was increased, the average attendance increased, the per cent. of attendance increased, and the number of cases of tardiness decreased and the last month of all made the best showing of all. Of course Superintendent Kerlin is retained for the coming year.

UNION CHRISTIAN COLLEGE located at Merom, Ind., in its announcement for its thirty-eighth year, makes a good showing. Its attendance last year was good, notwithstanding the close financial times, and the prospects are good for the coming year. The instruction is of a high grade, most of it being done by regular professors. Merom has never tolerated a saloon and this argues that the moral influences surrounding the college are good. For particulars address the president, L. J. Aldrich, D. D.

INDIANA UNIVERSITY.—The graduating classes this year were the largest in its history. There were one hundred and eleven who received the A. B. degree, twenty graduated from the law department and thirteen received the degree of A. M. The commencement exercises were unusually interesting and the audiences were large. The attendance at the summer school is two hundred and thirty which is the largest in its history. The summer school was established in 1890 with an attendance of thirty-one.

STUDIES IN INDIANA GEOGRAPHY.—The Intand Publishing Company [Terre Haute] has gathered together its studies in Indiana geography, which have appeared from time to time in the *Inland Educator*, and has issued them in a pamphlet volume. The work is intended mainly for teachers, but is valuable in the way of supplementing the study of geography in this State. It contains much scientific data not found in other text-books, and each chapter is prepared by a specialist in the particular line of the investigation covered.

THE Columbus high school has fallen upon a good plan to ornament the assembly room with busts and other specimens of high art. In connection with the high school is an orchestra which is well drilled and which renders excellent music. This orchestra gave a concert and with the proceeds presented the school with a twenty-three-inch bust of Beethoven. The senior class has just presented a twenty-nine-inch bust of Shakespeare. This course will soon fill the hall with art specimens of high grade. "Go thou and do likewise."

DELPHI.—Superintendent Almond recently sent out to mothers the following: "Every mother who is interested in the success of the Delphi public schools is cordially invited to visit any or all of the rooms on Thursday

afternoon, April 22, which will be known as "Mothers' Day." Teachers are ready to welcome all parents and to heartily co-operate with them in the realization of the ideal school. Will you come and by so doing encourage both teachers and pupils to more earnest and faithful efforts? Mothers, do you not really owe this much to your children?"

HOWARD COUNTY.—County Superintendent Geo. W. Miller has collected the following data relative to the teachers employed during the present year: Number of college or university graduates, 12; number of normal school graduates, 14; number of high school graduates, 33; number of teachers who have had one or more full years of work in college or normal school, 62; total number of teachers employed, 160. There are a number of others who have had several terms of work in professional schools. There are seventy-six teachers and young people who are attending the various educational institutions to better qualify themselves for teaching.

PERU.—All the members of the Peru school board went to Elkhart and took with them the entire corps of teachers and it was reported paid their fees, etc. Their generosity was commended on every hand and altogether they were looked upon as a model board. The *Peru Republican* now reports that this same model board is doing some very naughty things. It has reduced the wages of all teachers from top to bottom, cutting the salaries of high school teachers almost in the middle. It proposes to pay young inexperienced teachers the same wages paid to old and experienced teachers who are conceded to be superior in both scholarship and skill. And what is still worse it is charged that they have displaced teachers heartily endorsed by both the superintendent and the patrons.

MY DEAR MR. BELL:—I learn that a party professing to represent an Educational Aid Association in Chicago is canvassing for some Encyclopedia of Modern School Method Charts in the state of Minnesota, and is quoting what purports to be a letter from me recommending the Encyclopedia of Modern School Charts. The letter as printed is certainly a forgery. Should any of your readers know anything about this matter, they will confer an obligation on me by writing to me such facts as have come under their knowledge. Asking you to kindly insert this in the next number of the INDIANA SCHOOL JOURNAL,

Very truly yours,

W. T. HARRIS,

Commissioner.

COLUMBUS graduated this year a class of twenty-nine from its high school. This being the twenty-fifth annual commencement of the school, it was celebrated as the *silver anniversary*. There were two graduates who were children of earlier graduates. The *Daily Herald*, which is edited by a former educator, helped the class to celebrate and came out with a special edition of twenty seven-column pages. This edition contains pictures of Superintendent Carnagey, of Samuel Wertz, principal of the high school, and of assistant principal, Lucretia S. Armen. It also contains cuts of the high school building and of its various rooms. In the twenty-five years, the school has graduated 314 students; 111 of whom were boys. It is claimed that no other school in the State can show so high a per cent. of boy graduates.

**PERSONAL.**

W. D. KERLIN has been re-elected at Martinsville.

J. P. BONNELL is principal of the Waterloo high school.

G. E. DEE has been elected to take the schools at Redkey.

THOS. F. BERRY, of Roann, is the new superintendent at Fowler.

J. A. CARNAGEY will continue in charge of the Columbus schools.

W. A. WERT, last year at Redkey, goes to Greencastle high school.

R. A. OGG has been re-elected superintendent of the Greencastle schools.

J. B. PEARCY has been elected principal of the high school at Anderson.

MISS MARY E. NICHOLSON will remain principal of the Indianapolis Normal School.

PROF. PAULINE DAVIS, of Purdue, will teach French in the Bay View summer school.

C. E. EMMERICH will continue at the head of the Indianapolis Manual Training School.

H. H. KEEP has been secured another year as superintendent of the Waterloo schools.

WILLIAM F. BRITTON, class '97, I. U., has been elected superintendent of the Decatur schools.

W. E. M. BROWN will supervise music in the New Castle and Cambridge City schools next year.

HORACE ELLIS has been elected for a second year as superintendent of the West Lafayette schools.

W. H. FERTICH has been re-elected superintendent of the Bloomington schools at an increased salary.

J. R. HART, superintendent of the Lebanon schools, graduated this year from Indiana University.

GEO. W. NEET will continue in charge of Spiceland Academy and also of the Spiceland public schools.

CHAS. H. DRYBREAD, of Anderson, will be principal of the Hartford City high school the coming year.

OSCAR B. PERRY, class of '97, I. U., has been elected to the chair of chemistry in Vincennes University.

W. E. M. BROWNE will have charge of the school music in New Castle and Cambridge City the coming year.

B. W. AYERS will be principal of the Normal Department at Taylor University at Upland, the coming year.

MISS N. CROSEY has been re-elected assistant superintendent of the Indianapolis schools at a salary of \$2,500.

MISS ABBIE GILBERT, a graduate of Earlham College, has been elected to a position in the Martinsville high school.

W. F. GILCHRIST has been re-elected superintendent of the Jonesboro schools, with DeWitt Carter as principal.

J. E. ROBINSON, late superintendent of Morgan county, has been elected principal of the Martinsville high school.

ALASKA EATON has been selected by the Mooresville School Board to fill the vacancy caused by the resignation of G. B. Koffman.

J. M. DUNGAN, president of the Indianapolis College of Music, has had large experience and is willing to do work in summer institutes.

T. F. FITZGIBBON, who has been at Indiana University the last year on leave of absence, will resume charge of the Elwood schools next year.

J. C. BLACK, teacher of pedagogy in Anderson Normal School has been elected president of the State Normal School at Albion, Idaho. at a salary of \$2,000.

G. B. COFFMAN, who has had charge of the Mooresville schools for four years, has resigned to accept the superintendency of the schools at Chilli-cothe, Ill.

C. L. Hottel has been re-elected superintendent of the schools of Portland, Ind., for the seventh time. The city schools are reported in excellent condition.

F. A. MANNY, of Illinois, who has been studying under Dr. Dewey in Chicago University, has been elected a supervising principal of the Indianapolis schools.

W. P. SHANNON, superintendent of the Greensburg schools, will do institute work in Nature Study if called upon. Natural science is Mr. Shannon's specialty.

W. H. HERSHMAN has been elected for a third year as superintendent of the New Albany schools. The local press compliments very highly the work of Mr. Hershman.

SIGEL E. RAINES, formerly superintendent of the Sullivan schools, has been elected to the principalship of the Freeport, Ill. schools. He graduated at I. U. this year.

GEO. W. HUFFORD has been unanimously re-elected principal of the Indianapolis High School. This school graduates classes twice a year. The June class this year numbered 89.

R. J. ALEY, who has been absent from Indiana University a year, has secured his doctor's degree in higher mathematics and will resume his work in the university the coming year.

PROF. ELWOOD W. KEMP, of the State Normal school, is to be instructor in U. S. History at Bay View this summer. Professor Kemp is a historian of high rank and a superior instructor.

J. N. SPANGLER, a graduate of the State Normal and also of Indiana University, will take his master's degree at the Illinois University. He ought to come back to Indiana and teach.



A. T. REID, for many years superintendent of the Winamac schools, but later a graduate of the State Normal and superintendent at Sullivan, has been re-elected superintendent at Winamac.

MISS CLARA JANE MITCHELL, formerly principal of the schools at Mitchell, and who graduated at I. U. this year, will teach English and history in the Shelbyville schools next year.

JNO. A. WOOD, for seven years principal of the Frankfort high school, has been elected principal of the La Porte high school. Mr. and Mrs. Wood graduated this year from Indiana University.

J. T. REESE, of Connersville, was elected to succeed Wm. J. Stabler as supervisor of music in the Richmond schools. Mr. Stabler resigned to accept a position with the John Church Company.

W. H. GLASCOCK is doing a good work as superintendent of the Institute for the education of the blind. He was a good school man to start with and educational principles are much the same in all departments.

J. J. ALLISON, for several years superintendent of the Crown Point school but last year superintendent at Boise City, Idaho, has been unanimously re-elected at an increased salary, his salary now being \$220 a month.

H. G. WOODY served twelve years as principal of the Kokomo high school and has completed his fourth year as superintendent. Because of his long and efficient services he has been unanimously elected for another year.

D. S. KELLY, of Kansas State Normal school, has been elected superintendent of the Jeffersonville schools. Professor Kelly resigned the position he now accepts to go to Kansas. The JOURNAL bids him welcome to his old home.

JOHN H. CARROLL has had charge of the Grandview schools for three years and the local paper speaks of him and his work there in highly commendable terms. Mr. Carroll's name will be found in the list of those who were recently granted State licenses.

P. P. STULTZ, after eight years of faithful and efficient service, resigned the superintendency of the Jeffersonville schools. Superintendent Stultz is too good a man to lose from the educational work. The JOURNAL sincerely hopes he will find work in this State.

G. F. KENASTON, of Mankato, Minn., has been elected superintendent of the Crawfordsville schools *vice* I. M. Wellington, resigned. Mr. Kenaston was formerly superintendent of the Noblesville schools and has served several years as an Indiana school superintendent.

E. S. CLARK who is a graduate of the National Normal, at Lebanon, O., and who for a time worked in Indiana, has for the last twelve years been superintendent at Henderson, Ky., where he is doing a good work. He has just been unanimously elected for a thirteenth year.

DR. T. J. BASSETT, after twenty years' work in DePauw University, has tendered his resignation as principal of the preparatory department. The trustees entered a strong protest, but the doctor's mind was made up. He will probably enter the ministry. Dr. Bassett has done a great work for DePauw and for the State.

DR. J. H. MARTIN has resigned the presidency of Moore's Hill College, over the earnest protest of trustees and friends. Dr. Martin has been in the school work for many years and he has held many important positions, all of which he has resigned voluntarily. THE JOURNAL is not informed as to the doctor's intentions, but thinks it probable that he may retire to his beautiful farm home adjoining Moore's Hill.

R. V. CARLIN retires after fourteen years of service as superintendent of Steuben County. He was recorder of his county for eight years and superintendent of the Angola schools for nine years. This makes a continuous public service of *thirty-one* years. Mr. Carlin has done faithful, efficient service in all these relations and is to-day one of the most popular men in the county, and the better he is known the better he is liked.

J. M. CALLAHAN, a graduate of Indiana University, and for some time fellow in the department of History and Politics at Johns Hopkins University, successfully passed the final rigid tests at the latter institution and received the degree of Ph. D. in June. He is now in the Department of State at Washington where he has spent part of his time for two years in historical investigations. He is at present interested in Anglo-American and Spanish-American relations.

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### BOOK TABLE.

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HOW TO READ A PEBBLE.—A guide in nature study by Fred L. Charles, Lake View High School, Chicago, is a little book that should be attractive to many teachers. Address the author at Austin, Ill.

ILLUSTRATED LECTURES AND LESSONS on the Theory and Art of Penmanship, by H. W. Ellsworth, author of the copy books now used in Indiana. This is the most complete treatise on this much neglected subject yet published. It covers every phase of the subject and the explanations and illustrations are fully up to date. Every teacher should have a copy. F. B. Matthews is agent for Southern Indiana, and Jesse H. Brown is agent for Northern Indiana. See ad. on another page.

AN OUTLINE OF METHOD IN HISTORY, by Elwood W. Kemp, Professor of History in the Indiana State Normal School. Published by the Inland Publishing Company, Terre Haute. Indiana teachers know Prof. Kemp's superior ability as a teacher of history and they know that his methods are the very best. The book is the result of his experience as an instructor. The purpose of the book is not so much to give new facts as it is to note those which are important and point out the relation of other facts to these. It recognizes the principle that isolated facts are of but little value, and it also recognizes the truth that wars and battles are not the most important events in the life of a people. A teacher who will follow the plan of this book will make a great advance on the ordinary method of teaching history.

**DRAUGHON'S PRACTICAL BOOKKEEPING**, illustrated. By J. F. Draughon, Nashville, Tenn. Price, \$1.00. This work is not only for self-instruction by home study but also for use in literary schools and business colleges. Special attention has been given to the needs of intermediate schools in its preparation. This attention is evident in the full and clear illustrations, diagrams, etc., and in the peculiarly practical methods employed. The manner of presentation is such that even without previous experience, a thoughtful person can get a clear idea of the author's method of keeping books. Mr. Draughon is president of a practical business college in Nashville, Tenn. To a person who has no opportunity to receive personal instruction, he will give instruction by mail. Write to him for terms. Special rates to teachers.

**HOUGHTON, MIFFLIN & Co.**, Boston, have issued for school use a portfolio of portraits and pictures of homes of American authors. This portfolio contains thirty-seven pictures and is attracting a great deal of attention among teachers of literature. These pictures are photogravures and taken from "Masterpieces in American Literature" and "Masterpieces in British Literature." In very many schools a note book is provided for each pupil, who having contributed one or two cents for a portrait or picture of a home, pastes it in his book. He then proceeds to write in his book an outline of the life of the author together with some selections from his work. Such books are a source of great pleasure. Pictures are sold only in lots of ten or more. Price of 10 postpaid, 20 cts. If ordered in a lot of 100 or more, they cost 1 cent each.

**INSTITUTIONAL HISTORY OF THE UNITED STATES**, by J. A. Joseph, President of Central Normal College, Danville, Indiana Publishing Co. This book departs from the ordinary plans of school histories in this regard: Instead of treating the subject chronologically, beginning far back and coming down to the present, year by year, or period by period, it traces the history of each institution or subject and completes one subject before beginning another. A few chapter headings will indicate the nature of treatment. History Study and Teaching, Jesuits and Indians, Growth of Government, Making and Ratifying the Constitution, Judicial Department, Congress, Elections, Paper Money, Slavery, Education, Political Parties, Religion, Territorial Growth, Mail, Witchcraft, Inventions, State and Local Government, etc. The book will certainly be helpful in the hands of any teacher of history. It helps to give a comprehensive and connected view of each great subject.

**THE EARTH AND ITS STORY**: A first book of Geology—by Angelo Heilprin, Professor of Geology in the Academy of Natural Sciences of Philadelphia. Sixty-four elegant full-page illustrations. 12mo, 267 pages. Cloth. Introductory price, \$1.00. Silver, Burdett & Company, Publishers, Boston. New York, Chicago, Philadelphia. This book contains the story of Rocks and how they are made, their stratification, and the wonders they contain. The student learns how mountains are formed by foldings, overturning, breaking, and other upheavals. He is taught the origin, growth, and character of Glaciers, the work of underground waters, and what the sea does to the land by erosion and other forces. The Interior of the Earth is disclosed with its volcanic operations; Coral Islands and Reefs are explained and analyzed. Many of the useful and more common Metals and Minerals are considered, commercially and scientifically, as are also Building-stones, Soils, and Fertilizers.

**OUR LITTLE BOOK FOR LITTLE FOLKS**.—Arranged by W. E. Crosby. Illuminated covers, square 8 vo, 106 pages. Price, 30 cents. American Book Company, New York, Cincinnati and Chicago. This delightful little book is really many books in one, as it correlates and teaches reading, writing, number, drawing, form, color and music in the same book and often in

the same lesson. The first steps in reading are taught from plain vertical script which, as every observing teacher knows, is the easiest for children to read, to copy and to follow. Easy words are first used and then repeated again and again in simple, natural sentences. The illustrations are particularly noteworthy. The covers are beautifully illuminated, and within are many full-page color plates executed in the best style of lithography. The lessons throughout are made attractive by pictures in black and white, while a series of simple outlines for drawing, and of script copies for vertical writing are skillfully interwoven with the lessons, furnishing material for interesting diversions and useful exercises. Besides these, there are many songs for the children set to the simplest music. The last part contains pleasant stories and short poems to be read first by the teacher to the children and afterward by the children to themselves.

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*Reference:* INDIANA SCHOOL JOURNAL, P. J. O'Meara, purchasing agent Indianapolis schools, Mr. Makepeace, Indianapolis. 3-tf.

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School Year Begins Oct. 5, 1897; Closes May 25, 1898.

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For further information and catalogue, address the Dean,

W. P. FISHBACK,

# INDIANA SCHOOL \* JOURNAL

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AUGUST, 1897.

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## NATURE WORK IN THE GRADES.

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E. L. HENDRICKS, SUPERINTENDENT OF JOHNSON COUNTY.

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I shall certainly not run the risk of being illogical in the assertion that *nature* work should be done *naturally*. Nor by the term, "*naturally*," do I mean Rousseau's idea "*according to nature*"—else we might have assembled here to-day without shelter from heat of sun. Nature work should be pursued free from the slavery of text-books. Let the *teacher* possess and *know* all on the subject, if he will, but the *pupil* must be a *naturalist* engaged in *original investigation*. And to *him* the work is as *real* as *inspiring*, and as *helpful* as it is to a Tyndal or a Huxley. Books contain a summary of what man has learned—often poorly put in poorer phrase. Pupils delight in leaving this for direct contact with eternal truth revealed in the faultless rhyme and rhythm of nature.

President Jordan has well said: "There is a greater moral value in the study of *magnets* than in the distinction between *will* and *shall*, in the study of *birds* and *rocks* than in that of *dia-critical* marks or *postage* stamps, in the development of a *frog* than in the longer or shorter *catechism*, in the study of *things* than in the study of *abstractions*." Dr. Coulter affirms that nature study holds *no relation* to the study of the subject matter as presented in text-books. To *talk* of attending a feast is not so pleasing as to *attend* it. To *read* of nature can never prove as profitable as to come into *direct contact* with it. One of the

prominent things claimed for nature study is that intellectual freedom in which one *sees* and *thinks* for *himself*.

But if nature study be pursued *naturally*, it must be *methodical*, for in nature there is *method*. We have been warned against the fixed lesson prepared days in advance, (and it is well). If the pupil brings to school a "*rara avis*" we should be able to lay aside our "cut and dried" lesson to take up the emergency. But that means no *disorganization* of the teacher's *plan*. In fact, it proves that the teacher *has* a plan and is *superior* to it. Nor do we propose to teach all of the subjects taken up. We can not say "we have finished the golden rod." But the study of every plant should be pursued along general lines of *form, habit, use*—unless there be better plans. These lines of study may or may not be of importance in the minds of the *pupil*—probably they will *not*—but they will prove of *inestimable* value in his *retention* and *application* of the *truths learned*.

The accumulation of related facts through personal observation is the work to be done. The true teacher will also have another outline along which he will unobtrusively lead his pupils. Through the animal, plant and mineral kingdoms may be seen the beauty, wisdom and goodness of the Creator of the universe. Any study which falls short of this misses the harmony between man and nature, and is unworthy of the ultimate aim of education.

This leads me, in brief outline, to the question, "what is the aim of nature study?" Quotations from school journals and addresses might read as follows: "The aim of nature study is to cultivate observation"—another, "to establish an interest in nature." We grant that it cultivates observation, satisfies curiosity (not always wholesome), improves child language, makes friends of pupil and teacher, and many other things.

But the *chief* value of nature study, and its *ultimate aim* is *character building*. Moral character is based on *knowing* the *truth* and *using* that truth to the *best possible advantage*. No man can be moral unless he knows the truth. "Ye shall know the truth and the truth shall make you free." The rocks and hills, the lily and the bird tell the *absolute* truth. They tell of *good* and *evil*, of *friend* and *foe*, of *beauty* and *purity*. They reveal the limitation of man's power, they show the laws that govern phenomena and which we also must obey. And, in keeping with the child mind, the first question which comes after con-



tact with nature is, what can I do with it? Thus "the sensation goes over into thought, the thought into action. The impression of the object is built into the little universe of his mind. The object and the action it implies are closely associated. As more objects are apprehended, more *complex* relations arise, but the *primal* condition remains—*what can I do with it?* Sensation, thought, action—this is the natural sequence of each completed mental process." Shall he *crush* the worm or *rob* the nest—or has nature taught him that "gentleness begets gentleness, that kindness leaves no sting" and that *life* may be taken only to support *higher* life? Thus *volition* becomes *action*, *knowledge* becomes *power*, and *wisdom*, *virtue*. No other subject presents so many lessons on the development of moral character and spiritual power as nature study. "So simple, so natural, so true," says Agassiz. "*This* is the charm of dealing with nature herself—she brings us back to *absolute truth* so often as *we wander*."

The outline of my thought would be: 1. Nature work in the grades should be *free from texts*. 2. It should be done in a *methodical way* from the beginning. 3. It should have as its purpose, the *development of moral character* in keeping with the ultimate aim of education.

The following practical thoughts find no place in the outline:

*First.* I believe, from personal observation and from articles which have appeared in our journals, that plant life receives more than its proportionate share of attention in our schools. It seems to me entirely unnecessary, especially in our country schools, that emphasis should be placed upon this part of nature study. We are surrounded by the inanimate forces of nature. Animal life exists in *abundant* and *varied* forms. The country school child is well acquainted with the domestic animals. Here, as well as elsewhere, the study of the *familiar* should come first. It is a splendid way to lead to the study of the *wild* animals. Moreover, *animal* life more nearly resembles *human* life and is therefore more *interesting* to children. Let us not be *blinded* to the *advantage* which our country schools have in nature study.

*Second.* It is easy, in the multiplicity of subjects, with which the teacher of thirty recitations per day has to deal, to attempt too much in nature study. We were told to *correlate* the work. Then we were told that the only way to teach it is to go *right at it*, regardless of language or geography or anything else.

However much or little we correlate—and we can not avoid it altogether if we would—let us not insist that *all* the *plants, animals* and *rocks* which are accessible, be finished in our study of a year.

*Third.* The nature work which we do should strive to *overcome* that *sense of bondage* which the average pupil feels after he has become thoroughly initiated into the life of our average school room. The child has for his *friends* the *children of nature* until he has entered the school room. He soon becomes timid under the influence of text-books and by the time he has reached maturity stands ashamed before a blade of grass.

I once knew all the birds that came  
And nested in our orchard trees,  
For every flower I had a name—  
My friends were woodchucks, toads, and bees ;  
I knew what thrived in yonder glen,  
What plants would soothe a stone-bruised toe—  
Oh, I was very learned then—  
But that was very long ago.

I knew the spot upon the hill  
Where checkerberries could be found—  
I knew the rushes near the mill  
Where pickerel lay that weighed a pound !  
I knew the wood—the very tree  
Where lived the poaching, saucy crow,  
And all the woods and crows knew me—  
But that was very long ago.

And pining for the joys of youth,  
I tread the old familiar spot  
Only to learn this solemn truth ;  
I have forgotten, am forgot.  
Yet here's this youngster at my knee  
Knows all the things I used to know  
To think I once was wise as he !—  
But that was very long ago.

I know 'tis folly to complain  
Of whatsoe'er the fates decree,  
Yet, were not wishes all in vain,  
I tell you what my wish would be :  
I'd wish to be a boy again,  
Back with the friends I used to know.  
For I was, oh, so happy then—  
But that was very long ago.

—Eugene Field.

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JAMES BALDWIN, PH. D.

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MRS. EMMA MONT MCRAE.

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The simple life on an Indiana farm, the country school with its primitive ways have made many a boy dream dreams of a broader, deeper, higher life.

What James Baldwin dreamed and lived on that Hamilton county farm can be best guessed from what he has done in the years since he grew to a manhood that has been so full of inspiring work. He was born in 1841. He learned to read and write before entering school at the age of nine years, and early showed a fondness for good reading. Rather better than average opportunities were afforded the boy as he was sent to the public, district school in the winter, and to a private school under the management of the Quaker church, in the summer. His work as an author began at the age of twelve when he contributed to a juvenile periodical, Parley's Magazine, published in New York, and to Forrester's Magazine, of Boston. Through the township library, founded when he was fourteen years of age he came to know some of the best books. So much was he interested in reading at this time that he frequently took a book with him to the field that he might read while the horse rested. Nature as well as books appealed to the boy and so he became greatly interested in natural science, his ingenuity showing itself in the fashioning, out of rude materials a set of chemical and of philosophical apparatus.

Work on the farm seemed not to agree with his delicate organization, and so at the age of fifteen he was relieved from it on account of failing health, and placed in the newly opened Union high school at Westfield, in his native county. After completing the course of study he returned to the farm to assist his aged parents.

In 1864 he began the work of the teacher in his native district and in the same year married Miss Mary S. Taylor, of Holyoke, Mass., who was at that time in Indiana. In 1869 he began his career as a superintendent of graded schools, serving in that capacity in Noblesville, Huntington, Rushville and Greencastle. His longest service was at Huntington, where he spent ten years of the prime of his life. Such is the impress of his work in that

community that his name is revered as standing for a most potent factor in the high degree of culture attained in that thriving Indiana city.

As a school man he stood for certain things with a tenacity which resulted in fixing his ideals in the communities in which he labored. He showed fine organizing ability which enabled him to transform chaos into order. Where no library existed he at once established one adding to it as conditions permitted. Mr. Baldwin placed the interest of the child as of paramount importance. Hence he believed in making the school as thoroughly attractive as the ideal home. He demanded that an air of fine taste pervade the school room, and that the presiding genius should be a sweet-spirited, gentle teacher, free to work out her own ideals guided by the friendly advice of a superintendent. There was never on his part a disposition to thrust himself between the teacher and the pupil, for he always recognized the fact that in order to attain the best good for the child, the teacher must be master of the situation. He had rare insight to discover honest effort and always met it with kindly patience. He insisted that at the foundation of the child's education are spelling and reading and so he demanded that every child be taught to spell and read well.

Perhaps the greatest charm of his character lies in his innate modesty. A combination of justice and modesty prompts him to give credit to others for what at least has been suggested by himself. This is a virtue rare enough to be reckoned among the attributes of men of the finer sort.

Mr. Baldwin's work as a teacher and as superintendent of schools was of sufficient excellence to give him a large place in the history of Indiana, but his work as a lover and writer of books gives him a place of great significance. Through all the years he was engaged in school work he continued to browse among books. He tasted here and there never failing to discover the genuine. The same fine spiritual insight which made him an inspiring teacher has given him the power to become a guide of the highest order in the realm of books. Before he had given up the profession of teaching he had written, "The Story of Roland," "Siegfried," "American Literature," "Introduction to English Literature—Prose and Poetry," and "The Book Lover," besides many contributions to the standard magazines.

He has been connected with Harper & Brothers, The American Book Company, the Werner Brothers and again with The American Book Company, in all of which positions he has been engaged in book-making.

DePauw University did itself the honor of conferring upon Mr. Baldwin the degree of Ph. D., in recognition of the excellence of his scientific and literary work. As is not unusual his work, though so well done, has not brought the recognition its merits warrant. At times, doubtless, the author has felt that he has fallen among cold and unsympathetic surroundings, as he has lived in comparative isolation. He has suffered something of the fate of genius in all ages—he has lived and worked quietly, finding his chief compensation in the work itself. He has sought the heroic stories in the nearer and remoter past in the lives of Franklin, Washington, Webster, Lincoln, in the life of the East and of Greece, has retold them with the charm of the gifted story-teller so that both old and young may revel in the inspiring recital until the life is lived over again and new resolves are formed and a greater height is reached.

It is pleasing to note that so discriminating a judge as Superintendent Bright, of Cook county, Illinois, has said in one of his reports referring to a list of best books for children: "The books written by James Baldwin I wish to call special attention to. As a writer for children, I believe that he has no living equal, and his books are within reach of all."

Indiana teachers may well feel a wholesome pride in the fact that one of their number has risen to such eminence as to be rated among the best writers of the United States. Much in his character is worthy of emulation—much in his work is worthy of the most careful study. When the history of Indiana is written a very large place will be accorded to James Baldwin who has done so much in a quiet, unassuming, yet telling way to put forward the highest of all arts—the art of saying things so that they are worth being said. Indiana pays tribute to him who has outgrown her school-master vocation but not the affection of those who recognize him as their brother, working in a wider field of education.

Purdue University.

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The best capital for a boy is not money, but the love of work, simple tastes and a heart loyal to his friends and his God.

## MANUAL TRAINING IN THE PRIMARY GRADES.

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LYDIA R. BLAICH, CRITIC TEACHER, INDIANAPOLIS TRAINING SCHOOL.

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It is certainly true that Manual Training, in its broad sense, is of great value in the grades not only for the sake of the hand but also for the sake of the heart and head. If rightly introduced and carried out, it must in time help in the solution of the problem of the elimination of the bad by the substitution of the good.

The greatest faculty in the human being is his creative power, and alas! for the child of modern days there is nothing for him or her to create. The garments are brought ready-made into the house and thus the girls are deprived of the chance to work. The cheapness of all home utensils, with water-works and natural gas, etc., deprive the city boy of the opportunity of contributing to the comfort and happiness of the family.

In Manual Training the constant endeavor should be to make articles of use or ornament; then if well done, the girl's apron given as a present to her mother and the boy's bon-bon box filled with candy for the baby or his iron pen-rack presented to the father as a birthday remembrance, will serve the double purpose of intellectual and altruistic training.

It is not difficult to find work of this kind for the first three grades in the way of paper cutting and folding.

Sewing, which can not be so advantageously used in the above grades on account of the demands made upon the small muscles, can be used in the fourth and fifth grades, but instead of having a great deal of practice with the various stitches on canvas samplers counting the threads for each stitch, it is far better to begin with real sewing as soon as possible. Begin with a four-inch square handkerchief sampler. With it teach hem-folding, basting and stitching, giving instructions as to length of thread, use of thimble, the amount of light in the room and the worker's position with reference to it. After this make an ordinary sized handkerchief.

Next a sampler of two small pieces of gingham seamed together with the back stitch may be made. This ought to be followed by a real apron with which there will be learned gathering and sewing on band.

Then an outing flannel skirt of suitable size to be worn by the maker will not only review hem and back-stitch, gathering, sewing on of band, but will also teach the catch-stitch, button-hole, and sewing on of button. This will be found sufficient work for a year, if two lessons of forty minutes each are given weekly. If the expense for the course as here outlined is too great, doll clothes, with more garments than indicated above, can be made.

When the girl takes these home many a mother's interest will be awakened which before was lying dormant.

Without shop and bench it is a matter of no small difficulty to find manual training for the boys. Card board sloyd gives some suggestions. Out of the card board may be made square or prism-shaped boxes with appropriate pen and ink drawings and somewhat differently shaped boxes with "New Year's Bells" for the respective holidays, to be filled with candy or pop-corn.

A postal card holder ornamented with the Easter Lily and the printed word "Postals" makes a pretty present; or a triangular bon-bon box with drawing of chicken half out of the egg and the words "Easter Greeting" in ink or in water color is also suitable.

A blotter, with a bit of dainty ribbon fastened to a corner on which are painted in water-color, slender graceful grasses is an appropriate birthday gift to father, while a manilla paper pin-tray tied at the corners with suitable ribbon and ornamented with pen and ink drawings of the lotus flower, lily of the valley or daisy may be a birthday remembrance for mother. She may also be pleased with a card-board handkerchief case ornamented with drawings of pansies or forget-me-nots.

Photograph holders made and daintily ornamented with flower sprays can be used for the printed pictures of George Washington, Lincoln, Longfellow and Froebel on their respective anniversaries.

A course in bent iron work with iron strips one fourth of an inch wide not only greatly interests the boys but is perhaps more valuable for boys of the fourth and fifth grades because the iron is more resisting than the card-board, thus requiring greater exercise of muscular power which children of these grades delight in, and also because the work requires in addition to the ruler, the use of another tool, the plyers, which gives added value.

This work is more nearly like bench work, while its expense is more nearly attainable, a course of ten weeks' work (two lessons weekly) for forty-five pupils costing about twelve dollars of which sum eight and a half dollars are expended for piers and a pair of snips for the teacher, which can be used over and over, the vanishing material thus amounting to three and a half dollars.

The course is based on geometrical designs : first, right, acute and obtuse angles are made, followed by the square, triangle, rhombus, right-angled and obtuse-angled running borders, a pen rack and an iron mat for placing hot vessels ; e. g., a coffee pot on it.

All the work suggested in this article for boys can be used for the girls as well, even the iron work. If sewing is had for the girls, two rooms must work together, one teacher taking the girls and the other, the boys.

All this gives power of the mind over the hand and helps develop ingenuity. Moreover it will give suggestions for home employment. Accuracy and neatness are two character qualities that will be developed in Manual Training.

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### LABORATORY METHOD IN MATHEMATICS AGAIN.

MRS. ADELIA R. HORN BROOK.

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In the JOURNAL for June, Superintendent Hottel discusses so fairly and sensibly the laboratory method in mathematics and yet shows so plainly some fundamental misapprehensions of it that, as one who has worked by that method, I am impelled to reply to some of his statements and questions.

In all the reports of work done by these plans which I have read, and certainly in my own work, the laboratory method implies in addition to the personal work of the members of the class the discussion in open class of principles and theories and of their special applications to problems and demonstrations. There is no hermit-like isolation.

The laboratory method in natural science instruction is almost universal. No one supposes that the study of physics or chemistry means merely the working through of a laboratory manual in a go-as-you-please fashion, and I wish to protest as vigorously as possible, in behalf of those who are trying to work by these



plans, against any such supposition in the case of the laboratory method applied to mathematics. Such work would be unpedagogical in the extreme. Assuming that the laboratory method means merely that, not only are the strictures of Superintendent Hottel fully deserved, but in his effort to be fair in his statements and courteous to his fellow-workers it would seem that he had erred on the side of leniency.

Among the educational bulletins of the American Book Co., which can be obtained by teachers for the asking, is one called "Laboratory Methods in Teaching Mathematics." On page four a description of algebra work is found, "A short lesson developing algebraic ideas is given to the whole class." On page ten, in describing geometry work, the author says "A part of every recitation period is devoted to work with the class as a whole." This class period is devoted to the discussion of principles and of problems and demonstrations, which are the applications and illustrations of them.

Answering Superintendent Hottel's questions *seriatim* I would say that in my opinion it does afford opportunity for the "many-sided view" of those principles, for the "trial of strength," for the "leading of pupils to see mathematical truths," for the "fixing of principles," for the "sharpening of mind by contact with mind," and it does not fritter away the interest of the class by compelling each member to listen to the blundering recitations of the poorer students in their daily work.

It is very true, as Superintendent Hottel says, that pupils are not teachers. Under the class method it is a very common thing for a pupil to come into a geometry class unprepared, hoping to catch the demonstrations from others before his turn comes. In that case he is likely to get some very poor teaching and to furnish some of the same kind to those who listen to him. Under the laboratory method some teachers do not allow a pupil even to inspect the work of another until his own work has been passed. Each pupil must furnish each day some of his own work. He cannot trust to his chances of not being called upon that day, and of reviewing it all just before examination.

With regard to "discouraging weak pupils by emphasizing the difference in mental ability between themselves and the gifted pupils," is not the shoe on the other foot? Can anything be more discouraging to a weak pupil than to go on for a year or

even a half year and then to fail of promotion with all the publicity it involves? Under the class method that is the only fate for a weak pupil, unless the gifted are compelled to forego the advantages of their own ability in order to create a serene atmosphere of equality of results for the benefit of their weaker companions. This is too much to demand of bright pupils, and if voluntary, would be an unwise sacrifice upon their part, because it would give the weaker ones a very poor kind of training for the actualities of life. By the laboratory method, as I understand it, the weak pupil is encouraged to disclose his difficulties to his teacher, receives instruction adapted to his special care, makes some progress and falls in with a group of about the same stage of advancement. As far as my own observation goes, the weak pupil suffers less from shame than under plans by which he is compelled to make all his recitations public and subject to the impatient mental comment of clearer headed mathematicians. It is a pleasant thing to see, as I frequently have seen, a pupil who is considered backward come out in the period of class discussion with a clear and new presentation of some point which he has worked out by himself.

The question as to the degree in which the plans afford opportunity for the acquiring of self control is important. It is a mistake to suppose that the student is left to do merely what he likes to do. His work is laid out for him in regular order, and he has a certain period each day for study and for recitation, just as under the old plans. If he fails to improve his time he does not advance with the class. There are usually only a few pupils in a class who neglect their work and these single themselves out very effectually under these plans, and become subject to individual reproof, encouragement, punishment or assistance as the case may seem to the teacher to demand.

In any case the responsibility for readjustment of position or promotion is thrown upon the student.

The question "would the new method prove to be a success if used by all teachers or even a majority of them?" suggests the question whether there is any one method of teaching anything which would be a success if used by all teachers or by a majority of them. There seems to be nothing so difficult or remarkable about the methods as to prevent any successful teacher from using successfully some kind of laboratory work in mathematics

as well as in the other sciences ; but probably no two teachers would adopt the same plans. Certainly they ought not be required to do so. If one were so fortunate as to have that "teacher's delight" a class of earnest, well matched pupils, there would be no need for the individual adjustments of the laboratory plans. But that rarely happens in the case of a large class. The teacher who is compelled to carry along together pupils of greatly varying ability, giving the same instruction to all and requiring the same results from each must either sacrifice the interests of the quick to those of the slow, or those of the slow to those of the quick or ignore both by adapting his instructions to the "average" pupil.

The nature of mathematics and the constitution of the human mind are such that a failure to understand one part of the work causes failure in later work. Failure to learn a lesson on the geography of Europe does not prevent a child from learning the geography of Asia. He may miss a few lessons in history or literature without being incapacitated for understanding later lessons in those subjects. But the web of continuity in mathematics is such that the student who gets false or indistinct imagery in the first book of geometry is likely to have the same kind of imagery throughout his geometrical work. If he fails to understand fractions much of his later work is mistaken.

Our mathematical ideas must be exact or they are worthless. The difference in this regard between mathematics and other subjects commonly taught is one which has an important pedagogical bearing. We all have the imperfect or incomplete ideas of scenes and events in history. The concepts of foreign lands derived from our geographical study do not correspond exactly to reality, but they are of value to us. But misconceived mathematics is absolute nonsense.

The necessity of allowing to each pupil whose work is to be successful, the opportunity to create an abundance of accurate imagery is inescapable. If that opportunity is denied to him by the requirements of a grade which compel his teacher to take him over a certain amount of work in a certain time, which time happens to be insufficient for him, the result is failure. No presentation of a subject, however skillful, is useful to a pupil who is not prepared for it.

The laboratory method seems to be a useful device for secur-

ing more time for those students that need it, for their work, and for securing more work for those who need it to fill their time. As such it has found favor with those who have reported its use. It is one of the minor applications for certain established principles of education by which we are all trying to guide our work, as, "the development of the individual through self-activity," "the adaption of instruction to the capacity of the learner." The child-study movement emphasizes these principles and logically compels their applications. Unless the uniform graded system is not to be modified (not destroyed) by the application of those educational principles with which some of its features conflict, we are studying a great deal of psychology and pedagogy for nothing.

Methods must vary with local and temporary conditions, but principles remain.

I note with pleasure and approval Superintendent Hottel's wise caution about "wholesale and random experimenting." But since we find that the study of the noble science of mathematics, the science which is basic to all others, is productive of more mental confusion, weariness and aversion than any other subject commonly taught, ought we not to reconsider our plans of work in the light of educational principles with a view to striking out into new paths in those cases in which the old ones have led to failure?

High School, Evansville, Ind.

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#### MAN AND HIS SHOES.

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"How much a man is like his shoes!  
For instance both a sole may lose;  
Both have been tanned; both are made tight  
By cobblers; both get left and right;  
Both need a mate to be complete,  
And both are made to get on feet.  
They both need heeling, oft are sold,  
And both in time will turn to mold.  
With shoes the last is first; with men  
The first shall be the last; and when  
The shoes wear out they're mended new,  
When men wear out they're men dead too!  
They both are trod upon and both  
Will tread on others nothing loath;  
Both have their ties and both incline,  
When polished, in the world to shine;  
And both peg out. Now, would you choose  
To be a man or be his shoes?"

## A JUNE DAY.

Fresh from the deep, dark stillness of the night  
Comes forth the fair June day.  
Heralded by happy twitterings of birds  
Within their leafy coverts,  
And whisperings of breezes soft and low  
As if their praises spoke of her  
Whose coming they awaited.  
Sweet-scented petals drooping 'neath the weight  
Of jewels bright with which the night has graced them,  
Greet the pale stars that bravely linger on,  
Only to fade away at Morn's triumphant entry.  
Expectant Nature trembling waits her coming—  
When lo! a flood of light on hill and tree-top,  
Faint glimpse of dewy footprints in the vales,  
And all Earth's many-tuned voices waked  
Sing hail! All hail! bright morning of the June!  
All hail to the glad June day!  
Blithe, busy workers away!  
No matter how long the day may be,  
'Tis all too short for you and me,  
Happy workers we!  
All hail to the bright June day!  
Ah, that it could last alway!  
But we build us a home in the tree moss-grown,  
And soon, too soon, are our fledglings flown,  
And the happy time is gone.  
Farewell to the fleeting June day!  
She has almost faded away.  
The bird's evening vespers grow measured and slow,  
The sun in his journey far westward swings low  
And June's gone with his glow.  
Alas for the dead June day  
Laid with her roses away!  
Yet sing we a song of cheer and not a requiem drear  
Over her tomb to-day,  
For we'll see her arise beneath the blue skies  
Of next year.  
When the sweet roses blow in a faint golden glow,  
And the soft fragrant breezes are whispering low,  
To happy birds twittering in snug leafy nest,  
We shall see her again, the day we love best—  
Fair June day!

A SUBSCRIBER.

**DEPARTMENT OF PEDAGOGY.**

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**BEAUTY IN ART VERSUS BEAUTY IN NATURE.**

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**W. T. HARRIS, U. S. COMMISSIONER OF EDUCATION.**

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One of the good definitions of art describes it as a means of manifesting the Divine in material form for the apprehension of the senses and the reason. This definition makes art one of the three highest products of the soul. The three highest activities of the soul deal with the beautiful, the good and the true. Religion deals with the revelation of the Divine as the good. Art deals with its manifestation as the beautiful, and the truth in science and philosophy deals with the definition of the Divine for pure thought. The beautiful must contain two factors, first a material factor, as stone and other building materials for architecture ; stone, bronze and other material for sculpture ; canvas, pigments, etc. for painting ; air vibrations produced by the agency of strings and columns of air in wind instruments, etc. for music ; mental pictures of sensuous objects created in the mind through the words of the poet. Besides this natural side in art there is the other side, namely, the disposition of the material in such a way as to suggest spiritual activity—the feelings and passions of the mind, the motives of its actions, etc. It is this union of the spiritual with the material that makes art.

Inasmuch as the material has for its general characteristic inertness and receptivity of external impressions and complete absence of self-determination, what is material, as such, can not manifest mind, can not manifest intellect and will, because these are forms of self-activity. Material things become works of art when they are so disposed that they seem to manifest self-determination, or self-activity of a living soul, within them. It is evident, therefore, that the highest work of art will take on human form because the human body expresses most readily in its countenance, in its attitudes and gestures, the feelings, thoughts and volitions of the soul.

Regularity, symmetry and harmony are degrees of the full realization of the art idea. Regularity obeys a hidden principle ; symmetry presents identity under a deeper difference than regularity ; harmony shows the subordination of regularity and sym-

metry to a more complete expression of the soul. A string of beads shows regularity, the mere dead repetition of the same form, but even this dead repetition is a manifestation of identity and a suggestion of a common origin of the individuals in one process. Right and left hands are symmetrical but not regular. You can not place the right-hand glove on the left hand. There is correspondence instead of repetition and this represents the mind more adequately than mere regularity. The mind is an eternal vibration of subject and object. This is manifested in mere regularity ; but subject is opposed to object and this opposition is represented in symmetry. But the essential activity of the mind is much deeper than this. The mind as will modifies the object so as to make it conform to the subject. The mind as intellect thinks out the explanation of the object and finds it a manifestation of divine reason. Harmony or the sway of material objects by the indwelling soul, which uses it as an instrument and expression of itself, is the highest means of art.

With these principles in view, we are prepared to consider the question whether nature presents the beautiful in as high a form as art. It is obvious that inorganic nature by itself considered, does not take on forms that represent freedom. Its forms are all derived from without and do not express the desires, purposes or volitions of mind. When inorganic nature is used as material and the artist gives it the human form as a statue or group or makes it expressive of human thought, it may become beautiful.

Some writers on art hold the doctrine that art is the mere representation of nature, but this can not be a true definition because nature presents the ugly as well as the beautiful, and to represent the ugly of course does not convert it into the beautiful. A picture of the front of the Parthenon is beautiful because the Parthenon itself is beautiful. A picture of the Vale of Tempe if taken from the right point of view is beautiful. There are many landscapes that are beautiful but very few landscapes that are beautiful from all points of view. Nature in its prose reality is very seldom beautiful. The artist must select his point of view and must remove from his picture certain objects which, though real, mar the presentation of the main features.

From our definition of art we can see that it is important that art shall express freedom. But there are many kinds of freedom. There is, for instance, freedom in the body and there is freedom

from the body. The Apollo Belvidere and nearly all the forms of the Greek youth in the Pan-Athenaic procession on the frieze of the Parthenon are beautiful. They show the complete control of the soul over the limbs of the body. This beauty is gracefulness and Greek art is everywhere graceful; it is freedom in the body, but Christian art shows freedom from the body; that is it portrays martyrs under torture but with peaceful countenances showing that the soul reposes in the thought that it has conquered the flesh and attained to holiness. Christian art is the third form of art, Greek or classic art is the second form of art. There is a lower form called symbolic art in which freedom is as yet an unrealized dream. There is the painting of a struggle but the material body is too much for the soul and the soul can not realize itself freely. The art of Asia, eastern, middle and western, together with the art of Egypt is symbolic art and has this character of an ineffectual struggle against the environment. In its sculpture, the limbs are not at the service of the will. In its architecture, the pillars or columns that support the roof are clumsy and lack gracefulness. The human faces do not express conscious dignity and the repose of the soul. The temples either have an abstract unity which does not admit of ornamental details, or else the ornamental details do not reflect the unity and the eye gets lost in incessant repetition of trivial particulars which do not adapt themselves to the building as a whole.

Those who look upon nature as the source of the beautiful think of the landscape with its interesting variety of objects, its mountains and vales and winding streams, forests and meadows, the sky and the ocean. There is a sense of freedom which comes to us as we leave the city and pass into the country. In the city we have a burden of care constantly on our minds because we must be mindful of our human environment. We have complicated relations with our fellowmen and there is an unrelenting pressure of duty. When we come to the country and are alone with trees, mountains, meadow brooks and other inanimate objects, we have a sense of relief from duty and from the worry which a net-work of relations brings to us. This is not a sense of the beautiful, it is rather a charming sense of relief. The charming and the agreeable is sometimes the beautiful, and sometimes not, and in the case of the enjoyment of the green fields and the wild luxuriance of nature, we do not have the sense of the beau-



tiful so much as the sense of relief and freedom from care. There is, however, a symbolic correspondence of a landscape to the soul. Take for example, Church's "Heart of the Andes." In the distant background, the Andes Mountains rise to great height and are crowned with glaciers, not a rock projects through the vast snow fields. All the light of the sun is concentrated on these white summits. In the foreground of the picture we have a beautiful river with a cataract and rapids in front, on either side are venerable woods with the gay colored flowers that one finds in the tropics. There are birds with plumage of crimson and bright tints; a road winds along the banks of the stream and disappears in the forest. We trace the stream back through the central part of the picture; collections of houses or pueblos are seen on its banks and then it enters the mountains and we are sure that it is fed by the water melting from the vast ice fields above. Away up on the right, the eye ascends through great forests and above the crest volcanic flames are reflected on the ruddy clouds. Such a composition with variety in the foreground and sublime heights in the background bathed in sunlight is a ready symbol of the human nature which has its petty details consisting of daily occupations, amusements and disappointments, diversions and griefs, efforts and intervals of repose—for ourselves and for our neighbors—these are in the foreground of the picture of human life. In the background arise the moral elements of our character, the structure of reason itself, especially its moral laws, its intuition of the Divine, its religious faiths and its philosophical insights, these are abstract like the white snows on the glaciers. No green thing grows on them but they furnish, all the same, the fertilizing streams which descend to the vales of our mortal life. The stream of life and the stream of goodness that come from the Divine make glad the terrestrial abode of man.

Correspondence between divine and material things is the basis of poetry and art and we feel this correspondence in proportion to the degree in which we possess a cultivated imagination. Very few of us are conscious of the æsthetic feeling. When we analyze it, we find that it is due to a direct perception of will and intellect animating material things, or it is a dim consciousness of the symbol of human nature as a whole. A beautiful landscape must have heights and depths. Cut off the top of the picture with its distant heights and the foreground with its details will

soon weary us. We look from the variety which lies near us up to the eternal mountains, and the feeling of the beautiful arises in our minds. If we cut off the foreground and look only at the heights in the background, the picture becomes too severe and forbidding and it is no longer beautiful. We look from the cold and deserted snow fields to the foreground, following the charming river to the fertile fields which lie near us and both extremes become beautiful through the relation. But symbolic art is not the highest order of art. Classic art with its supreme principle of gracefulness is the highest order. Romantic art with its representation of freedom *from* the body forms rather the transition to religion and is not the most perfect form of art. Religion is higher than art. Morality and holiness are higher than beauty, but beauty is a good thing in itself and a religion that condemns the beautiful has not arrived at the perfection of religion. We are told by those who find the beautiful solely or chiefly in nature, that nature is a revelation of God: "God is creating the world all the time or it is creating itself under God's laws. Nature is a perfect revelation of God's love and law. Surely they are his laws which govern the universe; these laws never change." But nature does not make human institutions nor does it make art, or the constitutions or forms of states and the laws which secure justice and which make things into property and protect property by laws which secure man's freedom from natural wants. Nature does not make religion nor does religion become Christianity until it sees that will and intellect transcend time and space and can interrupt the natural causality in which each human individual finds himself. Nature does not make literature nor sculpture. In fact, the human form is not worth sculpturing until it has been trained in accordance with ideas of freedom. Beauty does not come into the faces of human beings until they are civilized. The Greek sculptor had to take for his models the youth who gained victories at the Olympian games and not the bodies of savages or of the people of Asia or Africa. So the revelation of the Divine is not through immediate nature which is a scene of violence. Fate rather than freedom is realized in nature by itself. The Divine which is absolute reason does not realize itself in rocks and soils, in mountains and plains, in oceans and lakes. These are base elements not divine in themselves, though used by the Divine in the creation of a world. And the world is not

for itself but a cradle for the development of individuality, through plant and animal. The divine purpose does not reach its end until it produces man who is an immortal individuality, free and responsible, in the image of his Creator.

The beautiful is distinguished from the useful in the fact that the latter is wholly for another while the beautiful is for itself. We give in sculpture and architecture, painting and music, and poetry the semblance of being for itself or independence to material objects. But nature is not able to do this except in a small degree.

Hence the beauty of art transcends the beauty of nature as much as man with his institutions excels nature with its inorganic and organic realms, in the function of realizing the Divine.

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### **LEND A HAND.**

*(This department is conducted by Mrs. E. E. Olcott.)*

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*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

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### **THE MEMBERS OF THE INSTITUTE.**

The members of every county institute may be said to be divided into classes. First, there is the *helpful* class. They come to the institute to receive and give inspiration and new ideas. They know full well that the attitude of the teachers is an important factor in the success of the institute. So they get all the good that the meeting offers. If the instructors' work is not just what they need, they, nevertheless, are attentive that others may not be disturbed. They attend regularly and promptly. They cordially greet acquaintances and strangers, and discuss educational topics; getting and giving good points learned from experience. Their interest is infectious, they *cheer* others by their very presence, and do more good than can be told. They make themselves familiar with the contents of every book table, and examine educational journals. They recognize that these are a part of the good things of the institute. They may not feel able to *buy* what they would like, what they really *need* perhaps, but they make note of good books and papers and school-room aids, and warm the hearts of the "pedagogical missionaries," *i. e.*

the agents who preside over book tables and take subscriptions for papers.

To the helpful class all institutes are, in a manner, good ; some institutes are much better and others are the best but none are irredeemably bad, because this class are alchemists who can turn to gold much that to others is dross.

The superintendent counts this class as jewels among his teachers. Yea, they are the salt of the institute (and of the profession) and, to a degree, the institute is "savory" or "flat" according as the "helpfuls" are many or few.

Next comes the *fair-weather* class, fair-weather both literally and figuratively. If the weather is pleasant and the instructors' work pleases them, they grow enthusiastic. They are hardly to be distinguished from the "helpful" class. But if it rains or the thermometer (as it often does) ranges high in the 90's or the exercises seem dull, then the difference between the classes becomes apparent. They are in fine spirits, and declare the institute the best on record, if "*the weather is fair*," but if it isn't they join the lower classes in getting in late, in leaving at recess, in taking afternoon naps at their boarding places, and in looking dreadfully bored. They fail to cheerily, heartily do their part to help overcome adverse circumstances. They vary with the weather.

The third is the "indifferent" class. They dislike to attend institute, but are ashamed to own it. They abound in excuses for absence. With this class, it is surprising how often institute comes just when they are away on a trip, or in the midst of harvest, or when some members of the family are sick. Sometimes when the "fair-weather" have joined the "helpfuls," and the tide of professional interest runs high, the "indifferent" class are borne upward on a passing wave of enthusiasm. Then they sit well toward the front, take a few notes, make an effort to exchange greetings with acquaintances, look at some of the "pedagogical missionaries'" books, and, perhaps, subscribe for more than one educational paper. At the close of the week they feel that they have been benefited by the institute but do not always realize that it was largely their own efforts that brought them the blessing.

Last comes the *conscript* class. Happily, their number is small, may it ever grow less. They detest institutes and must be

compelled to attend. "Heavy, heavy hangs over their heads" the lash of the teacher's license. If they have a license and are sure of a school, they may not even remember that it is institute week, unless they fear public opinion. Fear is the only motive force that can secure their attendance. They come as late and as irregularly as they dare, and sit as far back as possible. They read and whisper and giggle and doze and seem to be doing an unwilling penance.

To the "conscripts," institutes are always dull and dry-as-dust, some are drier and dustier than others, but all are irksome.

With what keen interest would each teacher examine the list if he or she could read in clear type to which class the county superintendent mentally assigns him or her !

It is but fair to say that none, not even the sturdiest of the "helpfuls," can be wholly superior to the weather. The oppressive heat or depressing moisture must effect all that are mortal. It is to be hoped that the advantages of early fall institutes will receive more attention. Then the atmosphere aids the mind in being alert and attentive instead of the reverse.

The interruption in the work of schools that have already begun is a legitimate objection. But if held early in October, the institute will come just at the beginning of the short-term schools instead of many weeks before as is now the case.

Some trustees will allow the teacher's salary to continue during the institute, others have the time made up at the close of the term, so there is no pecuniary loss. So that against the loss to the pupils occasioned by a week's vacation, may be placed the gain to the teachers from the facts: first, that the weather is bracing instead of enervating; second, that there is a greater interest because some are already teaching, others are ready to begin work and few or none are in doubt as to whether they will secure schools. Hence the institute is many fold more effective.

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#### DESK WORK—HOME-MADE BUSY-WORK MATERIAL.

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This is the month to put in order one's busy-work material and add new features to the store. There is time now, there won't be when school has begun. So work now that you may rest after school hours, and give the time to healthful recreation instead of wearily preparing "something to keep the little tots employed."

At the outset I will say these suggestions are intended especially for district school teachers, those who have several or all grades to teach. It is comparatively easy to provide material for two or three or even ten little pupils, while it is almost impossible to prepare the same aids for a school of fifty or sixty. I say "almost impossible" for I have seen all the devices I describe used by teachers who had made them, and in each case in a school of not less than forty pupils.

To some teachers busy-work that does not use slate and pencil seems like play. They fail to see that laying bright bits of card-board in attractive designs affords as fine training as making rows of neat accurate figures, because each teaches the child to *work*, inculcates the habit of industry. The child makes better figures, for having the cardboard tablets as "relief" work. So let me urge every teacher who expects to teach any first or second grade pupils to prepare busy-work material now, and thereby save himself or herself many a weary sigh after school opens.

If the trustee or school board will buy the material, rejoice with all your heart; but be sure to have some primary aids if you have to "make them yourselves." A hectograph or some sort of duplicator is such an able assistant that I hope you will buy or "make" one. Recipes for hectograph composition were given in a number of educational papers last year, and a detailed account of how to make and use one appeared in the *SCHOOL JOURNAL* of October, '96.

#### I—DESIGNS FOR OUTLINING.

Upon large pieces of card-board or heavy paper draw pictures or, write words to be outlined with pegs, lentils, or musk melon seed by the pupils. Be sure that the picture or word is made large enough to be satisfactorily outlined. The pegs should be the tiniest obtainable. The colored pegs sold by Thos. Charles and A. Flanagan, of Chicago, are the most desirable. Designs may be made in pairs—a picture on one and the corresponding word on the other. Anything of which a very simple outline may be drawn will suffice, as a tree, a leaf, a flower, a house, a table, a chair, etc. It is well to have a set of cards of dark red, blue or brown card-board or paper because the contrast with the light colored seed or pegs produces a more pleasing effect.

## 2—TABLETS.

Tablet laying comes to us directly from the kindergarten. The kindergarten tablets are made of wood or heavy paste-board, and are circles, squares, oblongs, and several kind of triangles. The home made tablets may be of card-board, and the square, oblong, and right angled triangle will give very satisfactory results.

If the teacher has more patience and perseverance than pocket money, she can cut these forms with scissors. But they may be cut for a trifle at a printing office. The tablets are used in laying designs and afford very absorbing work. It is an excellent plan to paste some of the best designs as an incentive to earnest effort and to keep as patterns.

## 3—SEWING CARDS.

Children like to sew pictures and words which they have outlined with pegs. They can also sew their own names, the Roman Numerals, figures, and even simple abstract problems. Sewing card designs may be bought and duplicated with a hectograph and so a whole class furnished with the best designs for a few cents. A new set of sewing card designs by Miss Lucy Haring, of Aurora, Ind., was on exhibition at the Southern Indiana Teachers' Association at Franklin. On her list were representations of each of the "Seven Little Sisters" and of the homes of each. These would furnish delightful busy-work and language exercises for even a second year grade. Besides these the set contains the heads of Washington and Lincoln, and representations of half a dozen familiar birds, which could be used in connection with bird study.

For sewing use the ordinary blunt pointed worsted needle. No. 22 is a convenient size and is the one recommended by most kindergartners and may be bought of Thos. Charles, Chicago.

The children perforate the designs themselves, before sewing them. Darning cotton in various colors will serve as thread. The circle, oval, oblong and triangles and the figures of certain animals may be cut from card-board. These are to be laid upon slate or paper and traced with a pencil by the pupils. They may afterward outline them with pegs or sew them. The name of each form or animal may be written upon each card, and by and by the pupils learn to recognize and finally to write the names.

It will not take long to cut these forms now and it will save so much time by and by.

#### 4—NUMBER BUILDERS.

Buy one set of any standard number builder, and duplicate it any number of times on a hectograph or by hand. Or provide yourself with a number of calendars and make number builders as detailed in the April SCHOOL JOURNAL.

#### 5—WORD BUILDERS.

For one set i. e., for each child, allow three each of the letters j, k, q, v, w, x and z, and six each of the rest of the alphabet, making 135 letters. This number will serve quite well, but 200 letters are better.

#### 6—WORD BUILDERS.

Probably the most satisfactory plan would be to buy one set of Prof. Edward Taylor's word builder, which was made to use with the Indiana First Reader before it was revised. Substitute the words that appear only in the new addition, and duplicate the word builder as many times as you need. Any other word builder could be used in the same way, or the teacher can make an original word builder. In the latter case care should be taken to provide words beginning with capitals for the first words of sentences, also periods and interrogation points for closing them.

#### 7—SUPPLEMENTARY READING CARDS.

There is nothing so satisfactory as complete sets of readers for the class. But as that is at the present impossible to obtain in most schools, other plans must be devised. The teacher may buy one copy of a primer or first reader and duplicate certain lessons in it. Or she may adapt stories found in some of the Young People's Reading Circle books, and make a copy for each child. Here is a sample from Cyr's Primer, published by Ginn & Co. The pupils should be shown in the primer the picture of snow flakes, and should then read from the cards :

These are little snow stars.

Did you ever see any ?

You can find them if you look.

The snow is made of these little stars.

When the snow comes you must look for them.



If such a supplementary lesson is given at the first snow fall the pupils will certainly look for the little stars.

Supplementary reading lessons appeared in several issues of THE SCHOOL JOURNAL during the past year. These were printed on the reverse side of advertising pages so that they might be clipped out, pasted on heavy paper and used by the children.

#### 8—OUTLINE MAPS.

With the aid of carbon paper the teacher may prepare for older pupils excellent outline maps at very small expense. Under the carbon paper place the card-board or paper which is to receive the outline. Over the carbon paper lay the map you wish to copy. With a blunt instrument as a slate pencil trace carefully the lines you wish to reproduce. When you have finished you will find upon the cardboard every line that you have traced. Suppose you have made an outline map of the United States, for desk work your pupils may write the names of the states and the capital and principal city of each in its proper place.

If you prefer you can buy copies of outline maps, and trace them as described or duplicate them with a hectograph. Outline maps are sold by D. C. Heath & Co., Boston. Several years ago the Columbus Business University, Columbus, Ind., exhibited mimeographed copies of outline maps designed for history and geography classes. I do not know whether or not they are still in the market.

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They soon grow old who grope for gold  
In marts where all is bought and sold :  
Who live for self and on some shelf  
In darkened vaults hoard up their pelf,  
Cankered and crusted o'er with mold,  
For them their youth itself is old.

They ne'er grow old who gather gold  
Where Spring awakes and flowers unfold ;  
Where suns arise in joyous skies,  
And fill the soul within their eyes.  
For them the immortal bards have sung :  
For them old age itself is young !

—C. P. Cranch, in *Scribner*.

**PRIMARY DEPARTMENT.**

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the  
Anderson Schools.*

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**GRASSHOPPER GREEN.**

Grasshopper Green is a comical chap ;

He lives on the best of fare.

Bright little jacket, trousers and cap,

These are his summer wear.

Out in the meadow he loves to go,

Playing away in the sun ;

It's hopperty, skipperty, high and low,

Summer's the time for fun.

Gladly he's calling the children, I know,

Out in the beautiful sun.

It's hopperty, skipperty, high and low,

Summer's the time for fun.—*Sel.*

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**ONE BACKWARD BOY.**

Albert is now eleven years old and has been in school the greater part of three years. He talked very little before he was seven—indeed he hardly talks yet. About two months before school closed this spring Albert's case was canvassed pretty thoroughly. He did not know a single word in reading, only a few of the simplest combinations in numbers, and he did not know the names of the letters so of course he could not spell. He seemed to have no memory for word forms at all. But he could copy any writing from the board pretty accurately, could lay patterns and group sticks and cards with a certain number in a group. The teacher said she could do nothing at all for him. What was to be done ?

Albert was transferred to another building and put with the children who had entered school in February. We would make one more effort to reach him. For we felt sure there was something worth working for if we could only find it. Our first plan was to encourage him to talk as much as possible. The other teachers were told about him and readily entered into the little plan of always saying "good morning" to him or of asking some little question. His teacher, Miss Bowen, arranged to send him to the other rooms to borrow the blocks or sticks needed, to find

a book, to carry a lost handkerchief and ask for the owner. She did not give him a note to carry but had him ask for what was needed. "Albert, will you please ask Miss Aushutz for the box of cubes?" And sometimes all he said when he asked was "cubes" or "sticks," but once in a while he used a sentence although very seldom. He was always willing to go and had such a manly walk and air about it that one could hardly believe so much of the work was blank to him.

Never was a little nature or general lesson given but that the teacher always made the attempt to make it interesting to Albert and if he saw it she knew the rest did. And he frequently was delighted to look for a certain word in a list especially if he found it first and heard Miss Bowen's "that is very good, Albert." It must be added that quite a part of the time Albert's face did not show any interest or even attention to the work but mischievous he never was.

In the second place the attempt was made especially strong to see if it was possible for him to learn to recognize printed words. The two and a half years of previous work with excellent teachers had not given him a half dozen words that he could remember. A number of devices were used—all the ordinary ones that were amply sufficient for the other children besides a number that applied to Albert only. With the others he made words and stories from his book and from the board with letter cards on his desk, he wrote the word from memory on the board at the time when the teacher was presenting the word for the first or second time. He tried to make little stories of his own from the entire words he already knew.

But Albert had special help. One part of the black board in the office was Albert's, and on this board all the words were placed as soon as he had had them in a lesson. Such words as blue, green, yellow, white and brown were put on with chalk of that particular color, for he distinguishes colors pretty well. After the words dandelion, dog, fox, cat, etc., appropriate pictures were drawn. Some of the words were in stories and the same stories read again and again, and the particular words picked out. But with this there was constant repetition. Albert went over these words, pictures, sentences, and colors usually once every day and sometimes oftener. Without this constant repetition the words did not make a sufficient impression to be

recalled. Of course the fact that he himself used language so little may help to explain in a measure, at least, how difficult it was to make any association.

There seemed to be a little difficulty in his enunciation and to help correct this and also just to get him to say something the little rhyme of "Jack and Jill went up the hill" etc., was sent to his mother with the request that she should teach him to say it. When he learned it he said it in such a way that he did not seem to realize at all what it meant. When he said it over to me we (that is I), talked about what a joke it was on Jill to fall down with a pail of water and I asked Albert if he had ever fallen down with water. He nodded his head "yes." I asked him if the water wet him any, and he put his hand on his knee.

A dog and pony show was in town and one afternoon after school the teacher took Albert to the show. She had written his mother for permission and it was readily given. Indeed it would be difficult to find parents who were more willing to do anything and everything for a child than were these. Albert brought a note from his mother saying he might go. He was excited—the first time I ever saw him so. He could hardly get the note out of his pocket; he dropped his hat frequently and then tried to brush off the dust; but not a word did he say. They walked to the show ground and just as they came near the ticket wagon Albert touched the teacher on the arm—he handed her a quarter, doubtless to pay for his ticket. She understood and said she had two tickets. So without a word he put the money back into his pocket. He seemed more interested in the dogs and ponies than in anything else where the teacher had a chance to observe him. He stood upon the seat the greater part of the time although he could see perfectly well sitting down.

Four times that afternoon he asked, "What are they doing that for?"—the only time in his entire school life when he has been known to ask a question. At the close of the performance he said, "I want to ride a pony"—the only wish or desire we have ever heard him utter.

But how discouraging it was the next morning to find that he seemed to remember almost none of it—at least during the talk the children had about the dogs and ponies he seemed utterly listless and could only tell us one or two little things about the show.

As to results, we were never sure we had reached any. Even when the teacher felt sure he had a point she frequently found it was gone. But at the close of the year, after two months of this persistent, conscientious, careful work, there were two results:—He talked more than he did. The teacher from whom he was transferred said when she passed him coming home from school he now said "good evening" or "how do?" instead of simply smiling as at first, and occasionally when she would ask a question or two about what he was doing in this other school he gave an intelligible answer.

In the second place, he was able to read lessons using about thirty-five different words. He could read entirely new lessons made up from the old words he knew. That is he could remember printed words although it had been an almost superhuman effort to get him to do so.

Further than this we really could not see any other immediate results and we wonder what part of this he will bring back in the fall.

But the teacher had studied attitude, facial expression and seeming defects in children as she had never done before. She watched every lesson to see what particular phase appealed to different children; she studied to determine how she could adapt lessons to the varying degrees of ability in the same class, so the brightest could be busy working out something for himself and the dullest, slowest child also doing his best. She learned not to expect too great immediate results. Be content to wait. She made such a study of literature on child study as she had never made before. She looked at a great deal of what she read with Albert in mind. If all her effort with Albert should result in nothing permanent with him she has, at least, made herself a much more valuable teacher than she ever would have been without it. She took the child because she was anxious to make a study of him and see what could be done for him.

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#### MISS HALE'S INTERVIEW.

Miss Hale's school year had closed. She had had her vacation and was now ready to give some careful thought to the school work before the new year began. She was a precise, order-loving soul with a keen eye and quick ear, but withal the most intense desire to do the best it was possible for her to do.

Visitors had remarked that Miss Hale's children were always orderly, always hard at work, never noisy. Parents were pleased, the superintendent and school board thoroughly satisfied. If Miss Hale had not been more than an average teacher, she would have cultivated those things that had won for her the reputation for being the best teacher in the county.

"Poor little Johnnie Fisher! I saw him this morning and he doesn't look at all well," she commented to herself. "He could not, or at least did not, sit still five minutes together last year. The doctor now says he has some nervous affection. I wonder if that was the trouble when he was so careless and dropped his pencil and ruler so frequently. Poor child, how often I punished him for it and made him do his written work over and over again because it wasn't smoothly done. That was too much to require of a six-year-old child, I'm sure."

She thus made a mental inventory of all the children as she never had made before. "I did not mean to do it, I really didn't," came again and again as she had thought of different children's excuses when punished for what seemed now trivial things. Producing a little book, she noted down one thing that was to be different next year. "The children are to be allowed to move freely in their seats. I hope they may learn to lift their feet instead of scraping them over the floor but they will not be required to sit absolutely still."

"And the sewing—that does make a good showing. When parents are told that little Mary or Fred pricked the holes through the paper so evenly and then sewed through these holes, they are astonished. Mrs. Brown said Fred could hardly lace up his own shoes and she did not see how he ever did the sewing. I did not tell her how I scolded him for his poor work and made him do it over. It was only the latter part of the year that I noticed how close he held his reader to his face and found he was a little near sighted." She also remembered how very difficult this pricking and sewing was for many of the children—they could not make the holes in line and could hardly put the needle through after they were made. "Yes, those cards look very pretty after they are sewed, but I am going to have larger holes made, use larger needles and coarser thread next year and do much less of that kind of work."

Then she thought over other busy work. She had used musk-

melon and cucumber seeds for the children to lay end to end and thus outline geometrical forms and the new words learned in the reading work. She knew it was difficult to keep the seeds in straight lines for they moved so easily. She had always said to herself, "If those seeds were rough and large, it would be no trouble to make the figure or letter exactly right." So she had always looked complacently on these tiny pieces of humanity sitting bent over, almost breathless, lest a smooth little seed should slip out of place, frequently sticking out their tongues and screw-up their faces in the effort to keep the lines just right.

Miss Hale's note book came out to note down this observation, "I question very much if it is a good thing to require little children to outline forms with small lentils or small seeds. I shall watch this part more closely and note its effect upon the children."

"I believe Miss Brown's children in the first grade like her better than mine do me. But then, she isn't so busy as I am when the children come into the room. I simply haven't the time to talk to each child about what he brings as she does." But this interview Miss Hale had with herself was a merciless, a cold-blooded one and she quickly turned—"Now see here, Mary Hale, you have just as much time for talking with your children as Miss Brown has with hers. You think it is time wasted. She doesn't. She knows all manner of little secrets the children have told her. You don't know one. When a flower is brought, she always remarks about its beauty or fragrance, or asks where it grew and the child is happy all day for the interest in his flower. What do you do? You hardly have time to say, 'Thank you. You may put it on the table.' She knows of every doll party in the neighborhood. You don't. And she doesn't have to scold half as often as you do even if she is very familiar, as you say, with her children. You may be able to get results that can be pasted on paper and put up on the wall better than Miss Brown, but is that the only test of education? Is that true culture?" Miss Hale's pencil again sought her note book: "I shall try not to be too busy to talk to the children socially, let them put their arms around me, see something pretty in every flower and apple and bunch of grapes brought me. I shall try to make my school a happy place and myself a congenial, sympathetic friend for the little babies this fall that start to school to me."

And do you think after this interview, Miss Hale will be able

to teach reading, nature work and number any better than she did last year? But is she not better able to teach school?

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### THE PRIMARY PROGRAM.

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A program is a very helpful thing in the successful school—not to be slavishly followed, but it always indicates in a special way when the work should be done and the length of time to be given to it. There are some ideas which if kept in mind materially help in making out the program of work for little people.

1. No recitation or exercise of the children should be longer than ten or fifteen minutes for first and second year. I was in a southern school some time ago and the official program gave 55 minutes each to reading and arithmetic. Some of the teachers had their class divided and had half of this period for one recitation and others did not divide the class but had the little first year children spend fifty-five minutes consecutively on each of these subjects. It is impossible to keep a child's interest continuously for an hour on one subject. A half-hour is too long as any primary teacher who has watched carefully has found out. The Committee of Fifteen voices the sentiment of the best teachers when it puts the time at ten or fifteen minutes.

2. If possible, do not have the sections too large—twenty is very large for beginners, fifteen is much better. In the country school probably the opposite tendency is found—there are too many classes. There is one child who was in school a month or two last spring and he must be in a class alone. I know a school in which there are two second reader classes, (two children in each class) only four lessons apart! In all such cases, it is far better to combine. The country school in many districts is burdened with too many classes at best and in every place where they can be put together, it is better to do so. It allows a little longer time for recitation, or more frequent recitations and increases the interest and friendly rivalry.

3. Be sure and average plenty of periods for rest. These six-year-old children have never been compelled to sit down in one place for five or six hours out of the day and try to work, and they cannot do it at once without injury to themselves unless they have frequent rests. The country practice of allowing the small



children to go out doors and play during the periods between regular intermissions is one of the best plans that can be devised for country schools. This helps very much to bridge over the complete physical freedom the child had before entering school and the restraint necessarily found in school. In graded schools, the children should be allowed to move around, go to the toilet, have a drink of water, if they care for it, and otherwise have a complete relaxation at least every three quarters of an hour. These rests may be in the nature of games, marches, or they may be entirely informal. But rests of some kind should come in to break up every one of the regular school periods between morning and recess, recess and noon, noon and recess, and recess and dismissal unless the dismissal for these smaller children is a half hour before the regular dismissal.

4. Allow a little time to change the busy work of a class at least every twenty or thirty minutes. It is just as necessary to attend to the busy work as it is to hear the regular recitations.

5. Put for the first period in the morning and afternoon the work on some particular bird or flower or animal on which the other work depends. The first period, then, may be *nature* or *general work*. In this comes the examination of the wild aster or golden rod. For instance, the children are provided with flowers and leaves, there is an entire stalk, root and all, on the teacher's table. The lesson is a nature lesson. At some period following this, the reading lesson may come, based upon what they found out in the first lesson. Certain phases of the reading work may be combined with this nature work. When they begin their nature lesson on the golden rod, the teacher may put the word on the board and call their attention to the name, and its color and fix the printed or written words, *golden rod* and *yellow*. We are long past the time when each lesson must be a clear-cut nature lesson with no hint of reading in it, or a reading lesson with no hint of nature or other subject in it.

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“Down and up, and up and down,  
Over and over and over ;  
Turn in the little seed dry and brown,  
Turn out the bright red clover ;  
Work and the sun your work will share,  
And the rain in its time will fall ;  
For Nature, she worketh everywhere,  
And the grace of God through all.

## NATURE STUDY.

## THE MORNING-GLORY.

[*This is the opening chapter in a book entitled "A Few Familiar Flowers," published by Ginn & Co.*]

Our first friend is the pretty vine growing over roadside hedges and stone walls, which the botany calls bindweed, but which is more popularly known as the wild morning-glory.

It bears a pink and white blossom about two inches long. Sometimes a wholly white variety is met with.

The cultivated morning-glory can be used almost as well, and the differences between the two will be noticed from time to time. Both belong to the same family.

The first thing to notice in our plant is the large and showy flower.

Suppose the teacher to have taken her little flock a short distance down the road on a sunny September day to where the flowers are blooming. They are less abundant than earlier in the season, yet there are several fine ones within reach.

It has been explained to the children that they are not to touch the flowers, only to look at them and get acquainted.

TEACHER: Here are our little friends. Can you see them, Nellie?

NELLIE: Yes. I see six or eight.

TEACHER: Do you think you could see them from the turn in the road?

NELLIE: I know I could.

TEACHER: What is the reason you can see them so far away, John?

JOHN: They are so big.

FRED: They are light colored. If they were green like the leaves we could not see them.

TEACHER: How they stand out in the sunlight! Look down under the vine, John, and see if you can find any hiding away.

JOHN: No, I can't find any under the leaves.

KATE: Here is one partly under a leaf.

TEACHER: Yes, that one is not quite as easily seen as the others. But which do you think the morning-glories like better, to hide away or to stand out?

MAY: I think they like to stand out.

[All the children agree with this.]

TEACHER: What holds them out in the light?

FRED: They have long stems.

TEACHER: So they have. Are their stems all the same length?

KATE: No, here is one with a stem twice as long as that one next it.

TEACHER: I wonder why.

JOHN: Oh, I know. That long stem starts under the leaves, and grows and grows so the flower can get out. The short stem is near the top.

TEACHER: Good, John. You know how to look.

KATE: Oh, Miss A., a bee went into mine!

NED: One's gone into mine, too.

TEACHER: What do you suppose the bees are after?

[Some of the children may know that the bee gets honey from the flowers. If so, accept the fact without discussion; if not, say you will try and find out another time what the bee is after, and proceed.]

TEACHER: What shape is our morning-glory, Kate?

Kate doesn't know.

Anne thinks it is like a cornucopia. May says it is like a bell. George says it is something like a tumbler. Fred says it is like a funnel.

"I think it is like a bell held up by the handle," Lucy says; "there is the clapper inside and all."

• TEACHER: What color is it?

SEVERAL: Pink and white.

JOHN: There is a pink part and then a white part.

NELLIE: The white parts run way down into the flower.

TEACHER: Let us count these white parts. How many are there, May?

MAY: There are five.

TEACHER: Are they the same size from top to bottom?

NELLIE: No, they are narrow at the edge and get wider as they go in.

KATE: They all run together down in the flower.

MAY: The flower is all white at the bottom.

TEACHER: Is the edge of the flower even?

JOHN : No, it is sort of scalloped."

TEACHER : How many scallops has it ?

JOHN : It has five scallops.

TEACHER : Now let us see if the white goes down the middle of the scallop.

CHILDREN : It does, it does.

JOHN : There's another bee.

TEACHER : Now we will go, and to-morrow we will come again and watch the bees go into the flowers, and see where they go and what they get. Perhaps we can play we are bees and so find out about it.

[This finishes the general survey of the flower. The work may be done in one lesson or in two or three, according to the age and intelligence of the pupils.]

Encourage the children to talk freely about the flower ; do not put set phrases in their mouths.

Have a good time, teacher and children together.

*The main thing is to have a good time.*

Get acquainted with the morning-glory in a pleasant, friendly way, and the scientific facts will take care of themselves.

If the children are able to write, have them write out what they have seen and talked about. It will be a good plan to have a blank book set aside for the plant study. They can thus keep all they have done on their plant together, making a pleasant record of the term's work. It will be convenient to refer to, to refresh the memory, and much pleasanter to go to a book they have made themselves than to consult a printed volume.

The younger children will need help at first in sentence-making ; but as soon as they can express themselves correctly in short sentences, let each child record his own thoughts, instead of copying from the blackboard or from the teacher's dictation.

A few short sentences at first may be very helpful in teaching the child the correct *form of expression*, but be careful not to carry arbitrary sentence-writing too far.

Remember the object is to train children to think for themselves and express their thoughts without help.

For young teachers who are having their first experience in the schoolroom, a few sentences expressive of what has been learned are appended. They are merely for illustration and hundreds of others equally good can be formed.

Suppose the children are ready to write.

TEACHER: Nellie, tell us one thing about our morning-glory.

NELLIE: It is bright.

TEACHER: What is bright?

NELLIE: The morning-glory is bright.

TEACHER: I will write what Nellie has told us on the board.

Writes: "The morning-glory is bright." Several of the children now read the sentence and then all write it. Similar sentences, as

The morning-glory stands up to be seen,

The bees come to the morning-glory,

The morning glory likes the bees to come,

The morning-glory has white lines,

The morning-glory is pink and white,

may be obtained as a result of observation, and written in the same way.

As soon as possible, let the children write what they think, without copying.

After the children have talked and written about the flower, calling the bright part by the familiar name of "flower bell," "flower cup," or whatever they please, tell them it has a very pretty name with a very pleasant meaning.

This name is "corolla," and means "a little crown or garland."

Ask them who wear crowns. Kings and queens do, and May queens wear garlands of bright flowers. So our flower, with its pretty corolla, its "crown," must be somebody very important; perhaps it is the queen of the whole plant.

Do not insist upon the use of the new word "corolla" to the exclusion of the more familiar terms "flower cup," "flower bell," etc., but add it to the other words. With a pleasant thought about the queen and her garland to help them, the children will soon find the new word as familiar as the old ones, and it will be adopted without any sense of strangeness, or any feeling that they are using a meaningless word.

After a flower part has been thoroughly looked at and the children *are acquainted with it*, then give the special name that distinguishes it.

*Be sure, however, the new word is not given before the child is perfectly familiar with the part it applies to.*

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**EDITORIAL.**

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**REPORT OF THE COMMITTEE OF TWELVE.**

Some three years ago there appeared a "Report of the Committee of Ten" on secondary education. It was regarded as the most important educational publication that had appeared in many years. Then came the "Report of the Committee of Fifteen" on elementary education, which attracted universal attention among educators, because of its valuable suggestions.

Now comes the "Report of the Committee of Twelve," on Rural Schools. The committee was divided into sub-committees and the subject was treated under the following heads: 1, School Maintenance; 2, Supervision; 3, Supply of Teachers; 4, Instruction and Discipline.

The report says that for purposes of organization, maintenance or supervision, nothing should be recognized as the unit smaller than the township or the county. The school district is the most undesirable unit possible. Effecting this change wherever the district system prevails would conduce to effectiveness and simplicity of organization, economy of funds, equalization of taxation and to a system of supervision which would produce better results. All the sub-committees favor the consolidation of schools which are too small to employ profitably the time of one teacher into larger schools, when practicable, in order that better instruction may be provided than is now possible. *Every community should be required to raise a certain sum for the support of its schools as a prerequisite for receiving its share of public money.* A certain definite sum should be appropriated to each school out of the State funds, and the remainder should be divided in accordance with some fixed and established rule, a discrimination being made in favor of townships most willing to tax themselves for school purposes.

One of the great hindrances to the improvement of the rural school lies in its isolation and its inability to furnish to the pupil that stimulative influence which comes from contact with others of his own age and advancement. The committee, therefore, recommends collecting pupils from small schools into larger and paying from the public funds for their transportation, believing that in this way better teachers can be provided, more rational methods of instruction adopted and at the same time the expense of the schools can be materially lessened.

There is a tendency to fill the rural schools with untrained, immature teachers. The establishment of the normal training schools, under competent instructors, with short courses, each year of which shall be complete in itself would do much to remedy this evil. The extension and adjustment of the courses and terms of the State normal schools so as to constitute a continuous session would enable them to contribute more directly than now to the improvement of the teachers of rural schools. The State would then be justified in demanding some degree of professional training from every teacher in the rural as well as in the city schools.

The establishment of libraries, the prosecution of the work of school extension lectures and other means, the introduction of such studies as will have a tendency to connect the school and the home, especially those having

a direct bearing upon the everyday life of the community, and the necessity of applying the laws of sanitation to the construction of rural school-houses demand immediate attention.

The rural schools are suffering from the want of official and intelligent supervision. In every state some standard of qualifications, moral and intellectual, with some amount of actual experience, should be demanded by law from those who aspire to fill the office of superintendent or supervisor of schools.

Good morals and good manners constitute an essential part of an educational equipment. The inculcation of patriotism, of respect for law and order, of whatever tends to make a good citizen, is of as much importance in a small as in a larger school. Regularity, punctuality, obedience, industry, self-control, are as necessary in the country as in the city school. Country school teachers should call to their aid the beautiful things in nature.

Some important recommendations made as to the instruction and discipline and the evils of attempting to grade rural schools as the city schools are graded are set out at length. In connection with school exercises at the town or county center, once or twice a year, competitive examinations are not recommended unless they are carefully guarded. The feature of social intercourse, the stimulus which comes from meeting with one's mates, have advantages which ought not to be neglected. There is embodied an interesting report urging negro teachers for negro schools. It says the instinct of the educational development of the negro must be from within and by the race itself and not solely through extraneous agencies; that the intellectual and moral dependence of the race must not be perpetuated, and that the responsibility of teaching his own race furnishes incentives and means for race elevation. The conclusion reached is that the instinct of race identity renders impossible the realization of an ideal relation between the white teacher and the negro pupil.

#### THE HEALTH OF SCHOOL CHILDREN.

The State Board of Health has issued the following "rules" and is in earnest about having them enforced. Teachers should study them and second the Board of Health in its efforts to preserve the health of the children. A child has a right to an education and he should not be required to sacrifice his health in order to get it. The Board is composed of learned practical men and every "rule" is reasonable and necessary.

##### SPECIAL RULES.

**RULE 1.** All teachers of public, private and parochial schools, all county, city and town health officers and all school authorities shall refuse admittance to schools under their jurisdiction of any person from any household where contagious disease exists, or any person affected with any evident or apparent communicable disease, or any person who may recently have been affected with diphtheria, membranous croup, scarlet fever, whooping cough, contagious skin disease, measles or other communicable disease, until first presenting a certificate signed by a reputable physician stating that danger of communicating such disease is past, and said certificate is approved and endorsed by the Health Officer in whose jurisdiction the person may reside.

RULE 2. School trustees in cities and towns, and township trustees, and all authorities governing private or parochial schools, shall have the school houses under their control put in sanitary condition before school is opened and kept so throughout the year. Floors shall be scrubbed, windows cleaned, desks and all woodwork washed with soap and water and treated with a disinfectant. Windows shall be in repair, so that ventilation may be made perfect. Heating apparatus shall be efficient and in good order and dirty walls and banisters made clean. Banisters and tops of desks shall be washed with soap and water and treated with a disinfectant once each week.

RULE 3. Trustees shall provide small drinking cups not to hold over a gill. Buckets and pails to dip from are condemned, and reservoirs or tanks of ample size having large, easy acting, free flowing faucets shall be provided. When water is drawn direct from public water pipes or pumps, reservoirs or tanks are, of course, not required. Ample drainage facilities for waste water shall be provided and the pupils directed to allow the cups to flow over when the water is drawn. Drinking cups shall be cleaned and sterilized daily.

RULE 4. Slates are condemned. Paper tablets or pads shall be used instead. Riveted metal boxes of tin or galvanized iron with hinged covers and of proper size, or other approved apparatus to subserve the purpose, shall be provided for each school room. These are to receive pens or pencils, which must be collected from the children each day, and shall not be again distributed until box or apparatus with the pencils and pens have been sterilized by heating in an oven at or above boiling heat for one-half hour.

RULE 5. Heating and ventilating shall be looked after with great care. Every school room shall be provided with a thermometer and a temperature not exceeding 75° Fahrenheit, nor less than 65° be maintained during school hours.

RULE 6. Janitors when sweeping shall use damp sawdust or slightly sprinkle in order to prevent dust. Dusting shall be done with damp cloths.

RULE 7. The water supply shall be pure and wholesome, and closet or privy facilities shall be unobjectionable.

RULE 8. Spitting on the floor of any school building is absolutely forbidden. Teachers and all school authorities are directed to enforce all these rules.

RULE 9. School authorities shall not employ teachers who are afflicted with pulmonary tuberculosis or any constitutional contagious disease; neither shall they permit pupils so affected to attend school; nor shall they permit filthy or unclean pupils to attend the schools under their control.

J. N. HURTY, M. D.,

DOUGLAS C. RAMSEY, M. D.,

*Secretary.*

*President.*

The writer recently had a talk with Dr. Hurty, the secretary and active member of the Board. He spends a great deal of time in visiting different parts of the State and looking after health conditions. The Doctor had just returned from a trip and he gave the following description of school house No. 5, Jackson township, Jackson county. The house is an old dilapidated frame, dirty beyond excuse. A great pile of coal was piled up in one corner of the room. Everything about the house was in keeping with the house. There was but one out-house for both sexes, and the partition dividing the two sides was full of large cracks. The Doctor had no words with which to describe the filth and stench of this building. He insists that under such conditions not only the health but the self-respect and common decency of the boys and girls are jeopardized.

For other rules and suggestions and for all needed information, address the secretary, Dr. J. N. Hurty, Indianapolis, Ind.



## VACATION SCHOOLS.

In most towns and cities in our State, sessions of the schools are held lasting eight or nine months of the year. During the other three or four months, the children are unrestrained by school regulations and in very many cases by any home regulations. It is true now as of old that "Satan finds some mischief still for idle hands to do." What to do with the boys and girls thus left to their own resources is assuming prominence with educational people. The question is not new but the methods employed to work a change are methods resulting from newer educational ideas. In the past, the main thought, largely with philanthropic people, was to give these children an outing on the score of physical health mainly. The newer thought is to gather them in vacation schools and employ them in some useful way that shall help them to help themselves.

The routine of work in these summer schools differs from regular school work of the rest of the year. While books are not wholly discarded, attention is mainly turned to work which will delight the eye and ear and at the same time keep the hand employed. School regulations are less strict, and the greatest possible freedom allowed.

In the larger cities, these schools have been a success. In 1895 New York employed eighty-four teachers in these schools. The city furnished the buildings and appliances, and the "Association for the Improvement of the Poor" paid the teachers. Chicago and Cincinnati are both working successfully along these same lines.

Last year, Indianapolis began the work in a small way by opening a vacation school on the South Side. The School Board furnished the building, a society of young people from Plymouth Church paid the teacher and furnished the appliances. This summer this same excellent work is progressing but on a much larger scale. The summer school, supported by Plymouth Church young people, has begun a second session.

The Free Kindergarten Association keeps open *three* of its kindergartens under the superintendence of Mrs. Eliza A. Blaker.

A vacation school is in session under the direction of Miss Lydia Blaich, critic teacher in the Indianapolis Training School, who has an article in the body of this JOURNAL. Another vacation school is under the care of Miss Adams and Miss Torrence, both teachers in the Indianapolis schools. In these schools, the School Board furnishes the buildings and supplies and these teachers give their services.

For five successive summers an out-door school has been held in Military Park under the direction of a trained kindergartner. This school attempts nothing with either books or tools. The teacher in charge directs the children's games, teaches them to be polite, kind and just in their intercourse with each other, and to respect the flowers, trees and shrubbery that form their surroundings. The teacher is paid for her services by Geo. Merritt, one of the city's most respected and most benevolent citizens.

Perhaps the time is coming when sessions in our common schools will be continuous, when vacation schools will be one phase of the regular work and when school boards will take pride in adding all the newer appliances required for the newer ideas.

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THE PRELIMINARY INSTITUTE.

On another page will be found the outlines for the preliminary township institute. This is the most important institute of the year and should in no case be neglected. These institutes should precede the opening of the schools and in all cases, the county superintendent should be present. Especial attention should be given to the organization of the school, and particularly the first day's work. This first day, especially to young teachers, is the most important day in the school year.

It would be well for the superintendent to designate some experienced teacher to prepare a short paper on "The First Day." If the teacher can go into a new school, knowing the classification and the classes, the program, the exact stage of advancement of each class, and be able to assign lessons at once to the great mass of the school, the advantage is immense. In this way, the school can be organized (and not disorganized) the first morning. With this preliminary knowledge, every pupil that had attended the previous school can be assigned work within fifteen minutes from the time the school is called to order.

It is always best for a new teacher to start with the classification and program that he finds, and then modify it as his judgment and experience dictate.

The superintendent should have his instructions and suggestions in form so as to not consume unnecessary time. There is no reason why two or more townships might not hold this preliminary meeting jointly, if it can be so arranged, especially if this arrangement will enable the superintendent to be present at all these meetings.

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ANTIQUATED TEACHERS.

It is probably true that in every corps of teachers of any considerable size, there are those, who were they out could not get in again. These teachers did good work to begin with, probably made an enviable reputation for ability and efficiency, but they have stopped study, stopped trying to improve, stopped growing, and are unconsciously going backward: or more properly, they are standing still and the more active and energetic are marching past them.

A teacher, however well prepared to start with, cannot continue to do business "till kingdom come" on his original capital. A teacher is like a tree in this respect; as soon as he stops *growing* he begins to die.

W. H. Wiley, superintendent of the Terre Haute schools, has asked his board to adopt this rule: "Teachers in order to keep their places in these schools must either secure a promotion or a vote of confidence, or ask for a leave of absence." Whether such rules are wise or otherwise, they prove that there are some teachers who will not keep up with the procession unless stimulated by some *vis a tergo*.

This is not saying a word against old teachers or teachers who have been in the service a great many years. Other things being equal, "experience" is valuable to the teacher, as it is to the lawyer or the doctor, but treadmill experience means stagnation. The teacher who continues to *grow* never wears out. Some teachers are born old; others are young at sixty.

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GOOD MORAL CHARACTER.

One of the conditions on which a teacher's license is issued is "good moral character." But the same thing is required of a saloon-keeper before he can secure his license. The standards of measurement, however, are not the same.

A teacher must not only be able to give instruction, but he must be an *example* to his school. Boys and girls invariably and inevitably sense the real character of the teacher and they do not know any better than to give free expression to their opinions. A teacher soon establishes his character in a neighborhood, and his influence is determined by this character.

The actions and words of no other person in the community, excepting possibly the preacher, are so carefully noted and so closely criticised, as are the teacher's. If a teacher does not always speak the truth, the whole community knows it. If he does not pay his debts, very soon every body knows it. If he goes to a neighboring town and visits a saloon, in some way the fact gets out. If he steals a part of the time he has sold to the community and devotes it to his own private interests, he will be criticised. If he does not keep his promises and engagements, people soon learn to distrust him.

A teacher's character should be above suspicion and above just criticism, else he should not be a teacher. A dishonest teacher should be an unknown quantity.

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CONTINUOUS SESSIONS.

The report of the Committee of Twelve recommends strongly the "continuous session" plan for normal schools. It argues that in this way teachers may teach half the year, or more, and attend school the remainder of the time. The State Normal school at Winona, Minn., has adopted this plan, as has also Chicago University.

The independent normal schools in this State have done this for years and have accomplished much good by it. A well organized school with all its conveniences and facilities, with apparatus, libraries, etc., can certainly do better work than temporary and transient "summer normals" upon which teachers so often have to depend.

The "summer normal" has done and is still doing a necessary work, but it can not take the place of a regularly organized school. The "continuous session" idea is certainly a good one, not only for normal schools, but for colleges.

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STATE TRUANCY BOARD.

*Circular No. 1*, issued June 19, 1897, by the State Truancy Board, directed county superintendents to divide their counties into districts as small as practicable for which truant officers should be appointed. Cities of 5,000 population or more would constitute separate districts. This districting has already been completed and the Truancy Board, consisting of Ernest Bicknell, Secretary of the State Board of Charities, and D. M. Geeting, State Superintendent of Public Instruction, are, at this writing, making the appointments required. By the time the schools open in September this most important feature of the compulsory education law will be ready for active operation.

## QUESTIONS AND ANSWERS.

### STATE BOARD QUESTIONS USED IN JUNE.

**READING.**—1. Why is the formation of the mental picture an essential step in every reading lesson? What other step is also essential? 10

2. What is literary language? Why should a pupil be made sensitive to all the points of beauty in the language? 10

3. Present, in full detail, the imagery of the "Vision of Sir Launfal," and state the separate truth mirrored by the different parts of the imagery. 30

4. Read a selection, chosen by the County Superintendent. 50

**GEOGRAPHY.**—1. What natural conditions favor the development of manufactures? What natural manufacturing conditions does Indiana possess?

2. Why does California have wet and dry seasons, similar to the seasons of the torrid zone?

3. What important agricultural products has America contributed to the world?

4. What effect have the Andes Mountains on the climate of Brazil? Why?

5. What province of British America is especially noted for its wheat product? What is the capital of this province, and upon what river is it situated?

6. Why is the eastern part of Europe colder than the western in the same latitudes?

7. Locate the following cities, and tell for what each is noted: Glasgow, Liverpool, Manchester, Birmingham, Belfast.

8. What waters embrace the Spanish peninsula? Why is the interior of Spain so sparsely inhabited?

9. Through what waters would you pass in the shortest all-water route from Liverpool to Bombay?

10. Why are rivers so large as the Obi, Yenisei and Lena of so little commercial importance? (*Any six.*)

**PHYSIOLOGY.**—Describe the circulation of the blood, state its functions, the chemical and physical changes that take place in it during its circulation, and where the changes take place.

**HISTORY.**—1. In what instances has the consideration of "availability" prevailed over other qualifications and claims in the selection of party candidates for president of the United States?

2. Upon what grounds did the Commission decide against great Britain in the Geneva Award?

3. What of good and what of bad did Andrew Jackson leave in American public life?

4. What can you say of the attitude of Horace Greeley toward Abraham Lincoln from 1858 to 1865?

5. Discuss the history work for the first six years as outlined in the State course of study.

6. What were the chief measures during the administration of Hayes?  
(Any five.)

GRAMMAR.—1. The name that dwells on every tongue,

No minstrel needs.

- a. Classify the sentence on two bases. Give reasons.  
b. Classify the words in the sentence and state the use of each. What is the basis upon which you divide the words into classes?

2. What is the difference between an adjective and an adverb? Illustrate.

3. Write a sentence containing a restrictive clause; a sentence containing an explanatory clause. Explain the difference between them.

4. "The school was dismissed for the holidays." "The school were not all present." Are these sentences both correct? Why?

5. Use the principal parts of the verbs *make, sit, lay, ride* and *write* in sentences.

6. Punctuate and capitalize: emulation is a dangerous passion to encourage in some points in young men it is so linked with envy if you reproach your son for not surpassing his school fellows he will hate those who are before him.

SCIENTIFIC TEMPERANCE.—1. Are the effects of alcohol the same on different individuals? Illustrate.

2. Name some of the perceptible effects on the bodily tissues of large single draughts of alcohol.

3. State the effects on the system of continued immoderate drinking.

4. Is one justified in drinking tea or coffee to relieve fatigue? Why?

5. What ground is there for the statement that the appetite for intoxicants may be inherited?

6. Some say that the smoking of an old pipe is more injurious than the smoking of a new. Is there any ground for this statement?

7. In teaching this subject would you advise the teacher to lay the greater stress on the physiological or moral phase of the question?

(Any five.)

GUIZOT'S HISTORY OF CIVILIZATION.—1. Name the elements, or ideas, at strife in primitive European civilization.

2. What was the primitive and genuine form of society in Europe?

3. What conflict of ideas, and what principle in State life are the outcome of these conflicting elements?

4. Explain political legitimacy.

5. Name the classes of persons in the civilization of the mediæval age. Were the classes fixed?

6. What was the condition of property at this time? The institutions?

7. Mention the causes of the barbarism of the age.

8. Give the causes leading out of barbarism. (Any five.)

SCIENCE OF EDUCATION.—1. What is meant by the comparative method of studying psychology?

2. What are the advantages of studying the mind of the infant and of the child before the school period?

3. Explain how it is that sensation lies at the foundation of all mental development.

4. State some of the most important facts in regard to the sight of young children.

5. As a rule, when children enter school at about six years of age, what is the character of their sense perceptions?

6. If a teacher of children has studied carefully the characteristics of children, what use would he make of this in his work?

7. What advantages would result from making the child's school life a close continuation of his home life. *(Any five.)*

ARITHMETIC.—1. Simplify  $\frac{6\frac{3}{4}}{\frac{4}{11}}$ .

2. A room is 20 feet long and 17 feet wide; which way must the strips of carpeting, one yard wide, run, in order to carpet the room most economically, allowing no waste for matching the pattern? What is the least number of yards that will carpet the room?

3. What per cent. of  $\frac{3}{4}$  is  $\frac{1}{8}$ ?

4. The interest of \$95.40 for 3 years and 9 months is \$28.62. What is the rate?

5. In what respect do the mental processes in written arithmetic differ from those of oral arithmetic?

6. What sum of money put at interest June 1, 1885, will amount to \$522, December 1, 1892, at 6 per cent.?

7. Find the number of board feet of lumber required to floor a dock 36 feet long, 17 feet wide, the planks being  $2\frac{1}{2}$  inches thick?

8. How many rods of fence will be required to enclose a field in the form of a right angled triangle whose area is  $13\frac{1}{2}$  acres, and whose base is 48 rods?

9. How many cords of wood in a pile 164 feet long, 16 feet wide, 30 feet high?

10. How does the arithmetic work in the first three years of the State Manual suit the needs of the schools at this time? Give a brief outline of this work.

#### ANSWERS TO PRECEDING QUESTIONS.

READING.—1. The content in "reading matter" is some phase of life, either subjective or objective, and it is the reader's function to experience it, to live it, in an imaginative way, as is set forth in the symbols. This is done by the forming of mental pictures, illustrative of the phases of life embodied in the language. If this is not done there is no apprehension of the thought. Another step that is also essential is the working out of the central thought of the lesson.

2. Literary language is that which deals with human life, not of plants or planets, of rocks or rivers, of material things or physical laws. A pupil should be made sensitive to all the points of beauty in the language, so that he may lift himself as far as possible above the level of the brute creation; so that he may enlarge his boundary of life; so that he may cultivate his power of the appreciation of the noble and the beautiful.

3. See Literary Interpretations.

GEOGRAPHY.—1. Navigable watercourses, water power, forests, coal mines, natural gas, iron mines, fertile soil, agreeable climate, favorable conditions for railroads, etc. Indiana possesses all the above except iron mines and extensive water power.

2. In Oregon, and the northern half of California, where the land is colder than the air-currents in winter and warmer in summer, there is a heavy rainfall in the former season and little or none in the latter; and in southern California, where the land is almost constantly warmer than the air-currents, there is very little rain, the climate is arid, and agriculture is possible only with the aid of irrigation.

3. Corn, potatoes and tobacco.

4. The Andes mountains condense the moisture of the trade winds that have come from the Atlantic, and thereby cause an immense rainfall on their eastern side. This great amount of moisture produces great rivers and forests, and these in turn tend to make the temperature of the Atlantic basin uniform, so that it has a small seasonable variation of heat.

5. Manitoba. It is situated at "The Fork," the confluence of the Assiniboine and the Red River of the North.

6. It is colder from the following causes: (a) The *cold* or *diminution of temperature* produced by the countries exposed to the chilling winds which come from the polar sea across the frozen plains and mountains of Siberia. (b) The *heat* produced by the vicinity of Africa in those countries which, lying nearest that portion of the world, feel, in a greater degree than others more remote, the influence of the hot winds proceeding from its burning deserts. (c) To a small extent, the warming influence of the Gulf stream.

7. (a) *Glasgow*, on the Clyde River; noted for its great manufacturing industries, and its shipbuilding; it has also the most extensive chemical works in the world. (b) *Liverpool*, at the mouth of the Mersey River; noted for being the chief post for American commerce, and the greatest cotton market in the world. (c) *Manchester*, thirty miles due east of Liverpool; noted for being the center of cotton manufactures. (d) *Birmingham*, in central England; noted for its hardware manufacture. (e) *Belfast*, on northeast coast of Ireland; noted for its manufacture of linen goods.

8. The Bay of Biscay, Atlantic Ocean, Strait of Gibraltar, Mediterranean Sea. The interior of Spain is of the nature of table lands, and the lack of fertility of the soil, and the lack of proper weather for growing crops, make it sparsely inhabited.

9. The shortest all-water route is the one by way of the Suez canal.

10. Because the country through which they flow is too cold to produce even the necessities of life. The climate of Siberia is excessive. It is exposed without shelter throughout its whole length to the winds which blow from the polar ice, and excluded by the high mountains of central Asia from the more genial breezes which would otherwise reach it from the equatorial regions.

ARITHMETIC.—1. Answer, 12 $\frac{3}{4}$ .

2. If the strips run the short way, it will take 7 widths each 5 $\frac{1}{2}$  yds.

long, or  $39\frac{2}{3}$  yds. If the strips run the long way, it will take 6 widths each  $6\frac{2}{3}$  yds. long, or 40 yds. The first way is the more economical.

3. Answer,  $66\frac{2}{3}\%$ .

4.  $\$95.40 \times R. \times \frac{1}{4} = 28.62$ ; therefore,  $R. = 28.62 \div (95.40 \times \frac{1}{4}) = .08 = 8\%$ .

5. They do not differ, except in the amount of activity put forth by the memory, this faculty being exercised more vigorously in oral arithmetic than in written, in holding before the mind the various elements of the problem.

6. The time is  $7\frac{1}{2}$  years.

$$1 \times 180 \times \frac{1}{4} = 45 = \frac{1}{2}; 1 + \frac{1}{2} = \frac{3}{2};$$

$$522 \div \frac{3}{2} = 360; \text{ hence, the principal is } \$360.$$

7.  $36 \times 17 \times \frac{1}{4} = 1,530$ , number of board feet required.

8. In the whole rectangle, there would be twice  $13\frac{1}{2}$  acres, or 27 acres, or 4,320 rds.;  $4,320 \div 48 = 90$ , the number of rods in the length of the rectangle, or of the triangle. The hypotenuse is found to be 102; hence the perimeter  $= 48 + 90 + 102 = 240$ .

9.  $\frac{164 \times 16 \times 30}{128} = 615$ , number of cords in the pile of wood.

10. See State Manual.

HISTORY.—1. A candidate for presidency is "available" in a political sense, if he can be used to carry out a certain purpose; if his characteristics are such that he can get the following of the common people; or if he has no prominent record as a statesman, such a record being regarded as a good target for the enemy. The first notable "available" candidate was *William Henry Harrison*. He was available for his nickname, "Old Tippecanoe," his homeliness and his simplicity, living in a log cabin garnished with coon-skins, and drinking hard cider. *Polk* was available for pushing the quarrel with Mexico, and for his firm and constant support of slavery generally. *Taylor* was available, partly for his war record, and chiefly because he had no other record. *Scott* was considered available for the same reasons, but, at the time of his candidacy (1852), the slavery issue was too prominent for a non-committal candidate to succeed. *Pierce* was available because he was a "satellite" of slavery. *Buchanan* was so likewise, and more, for he was acceptable to the North for his conservative tendencies. *Lincoln* was available because he was "honest," held the right principles, and was practically unknown. Something of a like nature may be said of Seymour, Hancock, Greeley, Hayes, Garfield, Cleveland and Bryan.

In studying out a complete answer to this question, the student must remember that there are different degrees of "availability;" and candidates other than those mentioned above, were, at the time of their candidacy, considered as possessed of this essential characteristic, to a greater or less extent. Men like Clay, Calhoun, Webster, Sumner, Blaine, etc., did not possess a sufficient amount of this availability, for their thoughts and deeds were too well known and too important for them easily to command a majority of the voters.

2. It was the duty of Great Britain to know for what object certain vessels were being built and fitted out in her ports. The British government



was deemed guilty of culpable delay, after the evidence of the character of the Alabama had been furnished by the American ambassador. All the evidence went to confirm the fact that the order for the detention of the Alabama was not sent by the British government until the vessel was ready to start, and it did start while the order was on its way.

3. In American public life, Andrew Jackson left of good: (a) The fact that his administration "did the incalculable good of giving to the national spirit its first self-reliant expression of resolution and of consensual power." (b) A determination to change the system of depositing the government money in state banks. (c) The effect of the specie circular, which had checked the spirit of speculation. (d) A government out of debt. (e) His example of stanch, unswerving patriotism.

Of bad, he left: (a) The spoils system; (b) ruined business interests; (c) a greatly increased number of banks; (d) The practice of borrowing money by several states; (e) reckless speculations in wild lands.

4. At the beginning of the war, Mr. Greeley's attitude toward Mr. Lincoln was one of opposition as to the use of force. The great editor thought that the government was not worth preserving if it had to be preserved by force. After the war began he did not think that the movements of the armies were sufficiently rapid and decisive, and laid much of the blame for their slow movements upon the administration. He also failed to give the administration cordial support in the most trying period, because, in his opinion, President Lincoln hesitated longer than he should have done to proclaim freedom to the slaves.

5. See outline.

6. The chief measures of the administration of Hayes were the withdrawal of the national troops from the southern States; (this was contemptuously called Hayes's "Sunday School Policy" by the "stalwart" Republicans); extensive and destructive railroad strikes; the extensive application of electricity to "electric" lighting and to the telephone; the Bland-Allison Silver Act passed over the President's veto; resumption of specie payments; treaty of United States with China limiting immigration.

GRAMMAR.—1. On basis of meaning the sentence is *declarative*, because it declares or asserts a fact; on basis of structure it is *complex*, because it consists of a principal and a subordinate clause. Words are classified as to their use.

2. A word that is used to point out, describe, or in some way to limit the meaning of a substantive is used *adjectively*, and is either a noun or an adjective; as, (a) he described the trachea, or windpipe; (b) the boy has a beautiful rose. A word used in this way is never called an *adverb*. If a word is used to limit the meaning of a verb, as in, (a) he speaks *gently*,—such a word is called an *adverb*, and its limiting force may denote manner, time, place, degree, etc. As it is often desirable to express a degree of an adverb or an adjective greater or less than is usually attributed to it alone, there are various words which are used for this purpose; as, too, very, hardly, more, most, etc. Such words are also called *adverbs*; words used in this way are never called *adjectives*.

Briefly—adjectives are used to limit or qualify the application of *substantives*; and adverbs are used to modify the meaning of words expressing *action* or *quality*.

3. (a) A canoe *which is made of bark* is easily broken; (b) Hope, *who whispers fine promises*, often deceives us.

The clause in italics in (a) is *restrictive*; in (b) is *explanatory*. A restrictive clause is necessary to the chief thought in the sentence, and its restricting or limiting influence will not permit its being pointed off by commas. An explanatory clause is not necessary to the chief thought in the sentence, and its being simply explanatory or parenthetical, it must be pointed off by commas.

4. The sentences are both correct. In the first the subject "school" is used to represent a collection of pupils to be considered as one body, as a unit; hence it is singular in meaning and must have a singular verb. In the second the subject "school" is used to represent a collection of pupils to be considered as individuals; hence it conveys the idea of plurality, and must have a plural verb.

6. Emulation is a dangerous passion to encourage in some points in young men. It is so linked with envy that if you reproach your son for not surpassing his school fellows, he will hate those who are before him.

SCIENTIFIC TEMPERANCE.—1. On various individuals whose lives have been much alike, the general effects of alcohol are the same. On one who has been an habitual user of alcoholic stimulants and on one who has never tasted any, the effects would be very different. To the former, a dose would hardly be felt, as the system has become inured to it; to the latter, a dose would be extremely pungent and irritating, as the system is in possession of its natural sensitiveness.

The first effect is a tingling pungent feeling; the after effect is a dull, heavy, morbid feeling, the feeling of drunkenness, and shortly, the victim dies. The structural effect on the tissues is to deprive them of their moisture and to harden them.

3. The effects on the system of continued immoderate drinking are congested capillaries, poor digestion, fatty degeneration of the heart and liver, a disordered mental condition, and paralysis.

4. Authorities do not agree on this point. Many say yes, because the harmful effects are not distinctly marked, or lasting. The fundamental principle in each is poisonous, yet on account of the manner in which those beverages are used their effects on the cell are not destructive, and their effects on the system even when taken immoderately are seldom harmful, while their invigorating effect at the time is well known.

5. The ground for this statement is derived from two facts: (a) Frequently the children of habitual users of intoxicants possess an unnatural and an inordinate appetite for them. In a line of descent free from users of intoxicants, a desire or appetite for them is never found; (b) scientifically, the offspring must reveal the characteristics of the parent.

6. Yes. The old pipe is lined with the "sublimation" of the poisonous vapor that has been passing through it for years. A small amount of this nicotine lining has been known to kill.

## 7. On the physiological.

GUIZOT'S HISTORY OF CIVILIZATION—1. The aristocratic, the monarchical, the republican and the theocratic.

2. Each of the foregoing claimed to be the primitive and genuine form, but no one of them held chief sway at the origin of European civilization. "They all existed there together, without any one of them having prevailed so generally as to give to society its form or its name."

3. The conflict of ideas was the claim made by each element that it alone was the first which held possession of European society. The outcome is that legitimacy may be found in all the systems.

4. "By political legitimacy is meant the right of a government to exist and to exercise the powers which it undertakes to wield." (See p. 70, Guizot).

5. (See pages 72 and 73 Guizot).

6. (See pages 73 and 74 Guizot).

7. The causes of the barbarism of the age were ; (a) the continuance of invasion, thereby preventing any settled civilized condition from becoming established ; (b) The strong individualism that reigned among them. Each man considered but himself ; he yielded obedience only to his own whims or passions. Under such conditions, society cannot become established. (See p. 75-80).

8. The causes leading out of barbarism were ; (a) man naturally tends toward improvement ; (b) the name of the empire, the resemblance of that great and glorious society still dwelt in the memory of many, and they desired to imitate it, to bring it back again ; (c) the efforts of the Christian church to influence the world around it, and to assimilate it to itself ; (d) the appearance of great men.

SCIENCE OF EDUCATION.—1. By the comparative method of studying psychology is meant the search for deductions by bringing together the experiences and knowledges of different teachers with regard to themselves and to those with whom they have experimented. To these results must be added the collateral means for psychological study as the sciences of biology, anthropology, sociology, anatomy and physiology.

2. The advantages derived from such study are ; (a) the discovery of harmful tendencies that can be crowded out of the child's life ; (b) the discovery of good tendencies that may be nourished and developed ; (c) the discovery of the mental content of the child, on which the work of the teacher is based.

3. Because the nervous system is the border land between the known and the unknown, and the special senses are the most delicate and complex parts of the nervous system, and constitute the avenues by which we gain a knowledge of the external world.

4. Most children are myopic when they are born ; but as the eye grows this short-sightedness naturally disappears. The cause of a *continuance* of myopia is the continued activity of the ciliary muscle in reading, writing, etc., or the continued convergence of the eyeballs, whereby the external pressure on the eyeball is increased.

5. At this time their sense perceptions are very keen ; by judicious management they can be kept in this condition.

6. This knowledge enables the teacher to know exactly what to repress and when, and what to develop and when. Such a knowledge is the *chart*, moral character is the *compass*, and the teacher is the *pilot*.

7. If the home life was an ideal one the advantages would be inestimable. The formation of good habits and manners, the storing away of useful and wholesome ideas, the development of a sound physical system,—all these would proceed uninterrupted by the transition from home life to school life.

PHYSIOLOGY.—1. From the systemic Capillaries, it is collected by the Systemic Veins which, converging into the Ascending Vena Cava and the Descending Vena Cava, convey it into the Right Auricle, which delivers it through the Tricuspid Valves into the Right Ventricle. From the Right Ventricle it is forced through the Pulmonary Valves into the Pulmonary Artery, which distributes it through the Pulmonary Arteries into the Pulmonary Capillaries found throughout the lungs. From the Pulmonary Capillaries it is collected by the Pulmonary veins, which, converging into Four Trunks, convey it into the Left Auricle, which delivers it through the Bicuspid Valves into the Left Ventricle. From the Left Ventricle, it is forced through the Aortic Valves into the Great Aorta, which distributes it through Systemic Arteries into the Systemic Capillaries found throughout the system.

The haemoglobin of the blood in the pulmonary capillaries finds plenty of oxygen in the alveoli ; hence, it unites with the oxygen, owing to the high partial pressure of the oxygen in the lung, and so forms the compound oxyhaemoglobin. On its course through the capillaries of the systemic circulation, the oxyhaemoglobin of the blood comes into relation with tissues poor in oxygen ; the oxyhaemoglobin is dissociated, the oxygen is supplied to the tissues, and the blood freed from this oxygen returns to the right heart, and passes to the lungs, where it takes up the new oxygen. The blood while circulating meets with most carbon dioxide in the tissues ; the high partial pressure of the carbon dioxide in the tissues causes the carbon dioxide to unite with certain constituents in the blood so as to form chemical compounds, which carry the carbon dioxide from the tissues to the lungs.

In the air of the lungs, however, the partial pressure of the carbon dioxide is very low, dissociation of these chemical compounds occurs under the low partial pressure, and the carbon dioxide passes into the air cells of the lungs, from which it is expelled during expiration. It is evident that the giving up of oxygen from the blood to the tissues, and the absorption of carbon dioxide from the tissues, go on side by side and take place simultaneously, while in the lungs the reverse processes occur almost simultaneously.

Functions of the blood ; the blood (*a*) nourishes and vitalizes the various tissues ; (*b*) carries oxygen to the tissues, which combination develops heat ; (*c*) warms and moistens all parts of the body ; (*d*) conveys certain waste matters emptied into it, to the organs of excretion ; (*e*) supplies the organs of secretion with the special fluid of each.

**Portal Circulation** :—The veins from the stomach, the spleen, and the intestines, converge into portal vein which entering the liver, and branching all through it, distributes its contents throughout that organ. After parting with certain substances and receiving others, it is collected by the hepatic veins, which converge into the two or three hepatic trunks. These convey their contents out of the liver and into the ascending vena cava.

## **FOOD FOR THOUGHT.**

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by Aug. 18. Be prompt. Write only on one side of your paper.]

### SOLUTIONS TO PROBLEMS.

**PROBLEM 191.** Given  $x^2 - \sqrt{x} = 78$ , to find  $x$ .—W. E. OCHILTREE, Attorney at Law, Connersville.

Solution by W. O. LYNCH, of the Elkhart High School :

Transposing etc. we get,  $(x^2 - 81) - (\sqrt{x} - 3) = 0$ ;

Factoring,  $(x + 9)(\sqrt{x} + 3)(\sqrt{x} - 3) - (\sqrt{x} - 3) = 0$ ;

Or,  $[(x + 9)(\sqrt{x} + 3) - 1](\sqrt{x} - 3) = 0$ ;

Therefore,  $\sqrt{x} - 3 = 0$ ;  $\sqrt{x} = 3$ ;  $x = 9$ , one value, the only rational root.

J. C. GREGG puts the other factor equal to zero, and gets the equation

$$[x + 9][\sqrt{x} + 3] = 1;$$

and substitutes  $y$  for  $\sqrt{x}$ ; this produces the equation

$$y^2 + 3y^2 + 9y + 27 = 1,$$

which may be solved by Cardan's method.

**PROBLEM 192.** Three times Jennie's age equals three-eighths of Gertie's age. In how many years will Gertie be twice as old as Jennie?

Solution by OTTO CLAYTON, Fowler :

Let  $x$  = Jennie's age; then  $8x$  = Gertie's age; let  $y$  = years to pass until Gertie's age = twice Jennie's age.

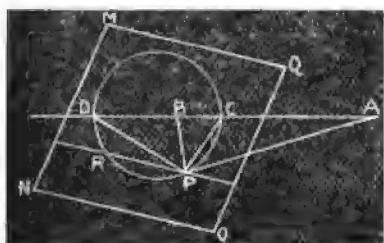
Then,  $x + y = \frac{1}{2}[8x + y]$ ; or,  $y = 6x$ ; hence the number of years will be six times Jennie's present age.

To this J. C. GREGG adds the following :

When Jennie is six times as old as she now is, Gertie will be 14 times as old as Jennie now is, or her age will be twice that of Jennie; *e. g.*, if Jennie is now 5, Gertie is 40, and in 30 years, their ages will be 35 and 70.

**PROBLEM 193.** Find the locus of all points in a plane whose distances from two fixed points are in a fixed ratio.—JOHN E. HIGDON, Instructor in Mathematics, Indianapolis High School.

Solution by J. C. GREGG, A. M., Brazil :



Let A and B be the given points, and MNOQ the given plane, and let the given ratio be  $m$  to  $n$ . Divide AB harmonically at C and D in the ratio of  $m : n$ . On CD as diameter describe a semicircle cutting the given plane in P and R. The sphere whose diameter is DC is the locus of all points in space whose distances from A and B are as  $m : n$ . Hence

the circle in the plane NQ, whose diameter is PR is the required locus.

A solution of the same by Analytic Geometry was sent in by OTTO CLAYTON, Fowler.

PROBLEM 194. Given  $x^2 + \frac{2}{3x} = 1\frac{1}{3}$ , to find  $x$  by quadratics.

Solution by W. O. LYNCH, Elkhart :

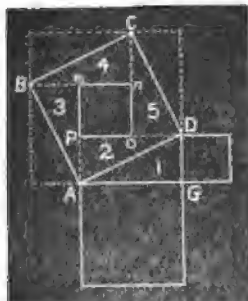
Clearing of fractions, etc.,  $9x^3 - 13x + 6 = 0$ ; factoring, we get,  $[3x^2 + 2x - 3][3x - 2] = 0$ ; hence,  $3x - 2 = 0$ ; or,  $x = \frac{2}{3}$ ; [The other values are as easily found.]

Another solution by J. C. GREGG :

Multiplying by  $x^3$ , we get  $x^4 + \frac{2x}{3} = \frac{13x^2}{9}$ ; or  $x^4 - x^2 = \frac{4x^2}{9} - \frac{2x}{3}$ ; adding  $\frac{1}{4}$  to each side, and extracting the square root, we have  $x^2 - \frac{1}{2} = \pm \left(\frac{2x}{3} - \frac{1}{2}\right)$ ; from which  $x = \frac{2}{3}$  or  $x^2 + \frac{2x}{3} = 1$ ; from this last expression,  $x = \frac{1}{3}[-1 \pm \sqrt{10}]$ .

PROBLEM 195. Prove by a geometrical construction that the square on the hypotenuse of a right triangle is equal to four times the triangle plus the square on the difference of the sides.—O. M. SHEKELL, Oriole.

Solution by W. F. HEADLEY, Bloomington :



To prove  $AD^2 = 4AGD + [AG - GD]^2$ . The rectangles AB, BC, CD, DA, have equal diagonals, are equal, and their halves are equal. Then triangles 2, 3, 4 and 5 are equal to four times triangle 1. The side of the square  $mnp$  is equal to  $AG - DG$ .

Hence,  $AD^2 = 4AGD + [AG - GD]^2$ .

PROBLEM 196. Two men dig a ditch two spades deep, the lower spade being harder digging than the upper. One of the men is stronger than the other. If the weaker man works on the harder "spade," they can throw

out the same quantity of dirt in a given time; but if they exchange, the strong man can throw out twice as much as the weaker man in a given time. They begin to dig, one at each end of the ditch. Where will they meet, and how should the pay be divided?—D. W. MCKEE, Atty. at Law, Connersville.

Solution by J. C. GREGG:

Suppose the lower spade is  $b$  times as hard as the upper, then B is  $b$  times as strong as A.

Then let  $x$  = the amount of hard earth that A can spade in a given time, and  $bx$  = the amount of soft earth; and  $bx$  = the amount of hard earth B can spade in the same time, and  $b^2x$  = the amount of soft earth.

Then  $b^2x = 2x$ ;  $b = \sqrt{2}$ ; hence A's wages : B's wages ::  $1 : \sqrt{2}$ , and they will meet at a point which divides the ditch into two parts which are as  $1 : \sqrt{2}$ .

W. F. HEADLEY sends a solution in which he uses two unknown quantities; his equation simplified is  $\frac{x}{y} = \frac{1}{\sqrt{2}}$ , or  $x : y :: 1 : \sqrt{2}$ .

PROBLEM 197. The sides of a triangle are in the ratio of 6, 8, and 9, and the area is 1,012 square rods; find the sides.—AUSTIN CLAYPOOL, Connersville.

Solution by JOHN MORROW, Charlestown:

$[6 + 8 + 9] + 2 = 11.5$ ;  $11.5 - 6 = 5.5$ ;  $11.5 - 8 = 3.5$ ;  $11.5 - 9 = 2.5$ ;  
 $\sqrt{11.5 \times 5.5 \times 3.5 \times 2.5} = 23.525252$ ;  $\sqrt{1012 \times 23.525252} = 6.5587$ ;  $6 \times 6.5587 = 39.3522$ ;  $8 \times 6.5587 = 52.4696$ ;  $9 \times 6.5587 = 59.0283$ . The sides are 39.3522, 52.4696 and 59.0283.

[Some solutions are omitted; they will be inserted in the August JOURNAL.]

### SOLUTIONS REQUESTED.

[Solutions that are requested will always receive prompt attention.]

PROBLEM 93, page 326, "Complete Arithmetic:"

The amount of  $\frac{3}{4}$  of A's money and  $\frac{1}{2}$  of B's for 4 years at 5% is \$8,400: how much has each if  $\frac{1}{2}$  of A's equals  $\frac{1}{3}$  of B's?

SOLUTION:— $\frac{1}{2}$  A's =  $\frac{1}{3}$  B's;  $\frac{3}{4}$  A's =  $\frac{1}{2}$  B's;  $\frac{3}{4}$  A's =  $\frac{1}{3}$  B's. The principal amounting to \$8,400 [for 4 years at 5%] is \$7,000;  $[8,400 + 1.20 = 7,000]$ ; substituting  $\frac{1}{3}$  B's for  $\frac{3}{4}$  A's, we have  $\frac{1}{3}$  B's +  $\frac{1}{2}$  B's = \$7,000;  $\frac{5}{6}$  B's = \$7,000;  $\frac{1}{6}$  B's = \$1,000;  $\frac{1}{3}$  B's, or all of B's = \$5,000.  $\frac{1}{3}$  B's = \$2,000, which is  $\frac{1}{2}$  A's; hence A's = \$4,000.

Divide \$121 among 4 boys so that A will have \$3 to B's \$4; B will have \$5 to C's \$6; and C will have \$7 to D's \$8. (Indiana Complete Arithmetic, page 338, example 133.)—S. A. L., Tippecanoe.

SOLUTION:

	A	B	C	D
A's is to B's as	3	is to	4	
B's is to C's as		5	is to	6
C's is to D's as			7	is to 8

In order to find numbers representing their shares comparatively, the 4 and the 5 must be changed to a common basis, and also the 6 and the 7. The least common multiple of 4 and 5 is 20. Changing the 4 and the 5 each to 20, and making corresponding changes, we have,

	A	B	C	D
A's is to B's as	15	is to 20		
B's is to C's as		20	is to 24	
C's is to D's as			24	is to 27 $\frac{1}{2}$
Multiplying by 7 to bring all to integers, we have				

	A	B	C	D
A's is to B's as	105	is to 140		
B's is to C's as		140	is to 168	
C's is to D's as			168	is to 192

Hence, A's is to B's, C's and D's, as 105 is to 140, 168 and 192;  $105 + 140 + 168 + 192 = 605$ ;  $\frac{1}{105}$ ,  $\frac{1}{140}$ ,  $\frac{1}{168}$  and  $\frac{1}{192}$ , respectively of \$121 give 21, 28, 33 $\frac{1}{2}$  and 38 $\frac{1}{2}$ , the number of dollars respectively belonging to A, B, C and D.

A railway train, after traveling an hour, is detained 30 min. It then proceeds at  $\frac{2}{3}$  of its former rate, and arrives 10 min. late. If the detention had occurred 12 miles further on, the train would have arrived 4 min. later than it did. At what rate did the train travel before the detention, and what was the whole distance traveled? (Milne's High School Algebra, page 158, problem 37.)—SUBSCRIBER, Winchester.

SOLUTION :—Let  $x$  = miles per hour traveled by the train, and  $y$  = the whole distance traveled.

Then  $\frac{y}{x}$  = number of hours it takes to travel the distance.

In one hour the train traveled  $x$  miles; there are  $(y - x)$  miles yet to go, at  $\frac{2x}{3}$  miles per hour; hence, it will be traveled in  $\frac{(y - x) 5}{6x}$  hours.

Therefore, the train was  $1\frac{1}{2}$  hours +  $\frac{(y - x) 5}{6x}$  hours on the road; this is 10 min., or  $\frac{1}{6}$  hr. longer than the regular time  $\left(\frac{y}{x} \text{ hrs.}\right)$ .

Hence the equation :

$$\frac{3}{2} + \frac{(y - x) 5}{6x} = \frac{y}{x} + \frac{1}{6} \dots \dots \dots (1).$$

Twelve miles further on would have been traveled in  $\frac{12}{x}$  hours; the distance then to be traveled would have been  $(y - x - 12)$  miles, at  $\frac{6x}{5}$  miles per hour; it would have taken  $\frac{(y - x - 12) 5}{6x}$  hours to travel it, and the train would have been  $\left(1\frac{1}{2} \text{ hours} + \frac{12}{x} \text{ hours} + \frac{(y - x - 12) 5}{6x} \text{ hours}\right)$  on the road; this would have been 14 min.  $(10 + 4)$ , or  $\frac{7}{6}$  hr. late.



**Hence the equation :**

$$1 + \frac{12}{x} + \frac{(y-x-12)5}{6x} = \frac{y}{x} + 70 \dots\dots\dots (2).$$

From these two equations, we readily find  $x = 30$ , and  $y = 90$ .

A merchant sold 15 stoves for \$161. He received \$19 for the largest size; \$7 for the middle size; and \$6 for the smallest size.—A. L. F., Rushville.

This is a question in *Alligation*. The numbers used in the problem give answers containing fractions. The following is the "figure work"—

Average price =  $10\frac{1}{8}$

19	4	1	1	3	1	7	1	5	6	1	4	7	1	8	5	+ 16	=	5	5	8							
7				8	1	8					1	2	4	3				3	1	+ 16	=	1	5	8			
6	8	4	8			1	2	4				1	2	4				1	2	4	+ 16	=	7	1	8		
																15)	2	4	0								
																	1	6									

**Answer, 5 $\frac{1}{2}$  stoves at \$19; 11 $\frac{1}{2}$  stoves at \$7; 71 $\frac{1}{2}$  stoves at \$6.**

QUERY 58. What fort was captured through a game of ball, in the early history of our country? What year?—L. F. KNIEF, New Orleans, La.

## CREDITS.

W. O. Lynch, Elkhart, 191, 194; J. C. Brower, North Manchester, 200, 201; Otto Clayton, Fowler, 192, 182, 193, 198; John Morrow, Charlestown, 191, 197, 200; W. F. Headley, Bloomington, 195, 196, 192, 200, 201; J. C. Gregg, Brazil, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201.

### PROBLEMS.

202. A drover bought 100 head of sheep and calves for \$387, paying \$4.50 per head for the sheep. Had the number of sheep and calves been interchanged, they would have cost \$413. How many sheep and calves respectively?—THOMAS JONES, Sulphur Springs, Ind.

203. A grocer fixed his price on tea so as to gain 20% ; but after selling  $\frac{3}{4}$  of it, he was forced to reduce his price 10 cents per pound, and so gained only 14 $\frac{3}{4}$ % on the whole. What was the cost per pound?—ID.

204. In a certain race, A can beat B by 80 yards; but if A runs at  $\frac{3}{4}$  of his usual speed, and B at  $\frac{1}{80}$  of his, A beats B by only 26 yards. Find the length of the race.—ID.

205 A farm rents for \$300 in money and a certain number of bushels of wheat. When wheat is 80 cents a bushel, the rent is  $12\frac{1}{2}\%$  less than when it is \$1.20 per bushel. Find the number of bushels of wheat.—ID.

206. Three circles touch each other externally at A, B, and C; the chords AB, AC of two of them are produced to meet the third again in the points D and E; prove that DE is a diameter of the third circle, and parallel to the line joining the centers of the others.

**O. P. MCAULEY**, an Owen county boy is still at the head of the history and arithmetic work in the Northern Indiana Normal School. He is a skillful teacher.

## **TOWNSHIP INSTITUTE OUTLINES.**

### **FIRST (PRELIMINARY) TOWNSHIP INSTITUTE.**

#### **PROGRAM.**

- 9:30—Opening Exercises.  
     Plato the Teacher.  
     Rest.  
     Teaching the Language-Arts.
- 12:00—Noon.
- 1.00—Method.  
     Rest.  
     School Organization.  
     Remarks by the County Superintendent.
- 3:30—Assignment of Duties. Adjournment.

### **PLATO THE TEACHER.**

#### **I. GENERAL INTRODUCTION.**

1. Condition of Athens at the time of Plato's birth. *a.* Political. *b.* Economic. *c.* Artistic. *d.* Philosophical. *e.* Social.
2. Greek Philosophy before Plato. *a.* Crude beliefs held—significance of these. *b.* Influence—origin of the Sophists.—Distinguish between these and the philosophers. *c.* The Comedy—"The Clouds"—Significance of.
3. Plato's teacher.
4. Plato the philosopher—dramatist—lover.
5. Plato the teacher.

#### **II. APOLOGY.**

1. Introduction. *a.* What the real conflict was between.
2. What showed Socrates to be the wisest of men. *a.* The oracle. *b.* Such a speech would now seem egotistical. Why this does not.
3. State the accusation against Socrates. *a.* His answer to first part of charge. *b.* His answer to second part of charge.
4. Spirit in which his defense is made. *a.* Does he make his points?
5. Compare his views with the 19th century opinions. Note how many of his sayings embody ideas found in the New Testament.
6. Socrates claimed that he taught no man anything. Discuss.
7. The greatness of Socrates shown by the spirit in which he accepted his condemnation.

#### **III. EUTHYDEMUS.**

1. Difference between Socrates's manner of teaching and the reasoning of the sophists Euthydemus and Dionysodorus. *a.* Why was Socrates considered a sophist by the average Greek? *b.* Crito's concern in selecting a suitable instructor for his sons.

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TEACHING THE LANGUAGE ARTS.

## I. THE SCOPE OF THE WORK.

1. Murray's Grammar, and the former state of grammar work in schools.
2. The first real step forward.
3. Value of parsing. (p. 5 a).
4. Value of sentence analysis. (p. 5 a).
5. Present tendencies of our schools.

## II. THE LANGUAGE ARTS DEFINED.

1. Distinguish between science and art.
2. The two views of art.
3. The elementary school arts enumerated.
4. Further distinction between science and art. (p. 11 a).

## III. THE VERNACULAR AS AN INSTRUMENT OF ART.

1. The psychological relation of language and thought.
2. Historical relation.
3. Relation existing between national character and language.
4. Mutual relation between a pupil's thinking and language. (p. 20 a).
5. The benefit of accurate thinking in studying the different branches of study.

## IV. THE WORK OF THE ELEMENTARY SCHOOL.

1. The child's two mental possessions upon entering school—value of same.
2. Teacher's twofold work.
3. The manner in which the child has acquired his present knowledge "will determine in a general way, for the time being, the method of the school."

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METHOD.

*Note.*—Every teacher should *master* this lesson on Method, as it will be constantly referred to in the discussions on grammar, composition, history, geography, arithmetic and spelling. The terminology used here will be used there. For a further discussion of method, see pp. 46-47 *Inland Educator*, August, 1895.

## DEFINITION.

1. Show that Method is a mental process; that it is the mind's action in mastering a new point of knowledge; that it is the mental process in making real the ideal; that it is the mind's activity in making the *objective* *subjective*; that it is thinking an object. Show that this is true with respect to a particular point; with respect to a branch of study, and with respect to the objective world.
2. Let the popular meaning of the term Method be considered, viz: that it is a device—a manner of manipulating cubes, toothpicks, letter-cards, questions and text-books. (Show that the former view—the true one—is the most helpful.)

3. Method in its true sense is universal, *i. e.*, the same for all minds with respect to a given point. There are not various methods of learning the same point of knowledge. Illustrate.

4. Number of Methods. Suggestion: There is one for every individual. There is one for every subject.

(a) The pupil's method.—In the teaching act the *pupil's* mind performs the activity necessary to master the thought in the object taught. He also sees more or less vaguely the purpose of the lesson. But he probably does not observe to any great extent his own mental activity in conveying the thought (in the external object being taught) from this object over into his own self, in making this external object (*i. e.* the thought in it) a part of his mental furniture—making it subjective. (This external object may be physical, as the cube, or spiritual, as the idea patriotism.) Neither does he expend much mental energy upon the means used by the teacher in leading his mind to act the activities appropriate to the points under consideration, *i. e.*, the activities necessary to master the points. Nor does he consciously emphasize his knowledge nearest related to the new point, nor consciously relate the new point to this knowledge.

(b) The teacher's method.—The teacher on the other hand must not only think what the pupil thinks, but must think the pupil's thinking. He must think the thought in the point to be taught (*subject-matter*); he must see in terms of the child's spiritual development the reasons for teaching the subject-matter (purpose). Purpose is the beginning and the end in the process. The purpose as idea—the beginning—moves forward in the process to its realization—the end. The teacher further sees the pupil's nearest related knowledge which he can use to build upon (*basis*); also the activities of the pupil's mind in mastering the subject-matter (*steps*), and the means which he can best use to lead the mind of the pupil to take the appropriate steps (*devices*). Thus in the teacher's method he thinks: *a.* Subject-matter. *b.* Purpose. *c.* Basis. *d.* Steps. *e.* Devices. (Show that this must be done in teaching a single point, a whole lesson, or an entire subject.)

## SCHOOL ORGANIZATION.

### I. IDEA.

*a.* Show that the school is an organism. Show the parts; unity of co-operation of parts; the end, or purpose; on what the unity of co-operation of parts depends. (pp. 695-698 IND. SCHOOL JOURNAL, Dec. 1891).

### II. SCOPE.

*a.* School premises. 1. Why should the teacher understand how these should be? 2. Discuss the use of school yard.—*a.* For Discipline. *b.* For exercises. *c.* Other uses.

*b.* Lighting school room. 1. What is the best mode of admitting light? 2. What is the effect of too little or too much light?

*c.* Heating and Ventilation. (Describe what you think is the best system of heating and ventilation).

d. Classification. 1. Difficulties. 2. Bases. 3. How does it help first day's work in a new school? 4. What is the difference between classification and gradation?

e. Program. 1. Basis for the arrangement of subjects. 2. Why should it not be variable?

f. Apparatus. 1—2—3—4—5.

g. Records. 1. Their Object. 2. What is the advantage of keeping them accurately? (Pages 561 to 565 IND. SCHOOL JOURNAL, Sept., 1889).

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### PLATO THE TEACHER.

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Plato was born 429 B. C. at the beginning of the Peloponnesian war, the year in which Pericles died.

"The period during which Pericles guided the destiny of Athens forms the most brilliant epoch in her history. Down to the time of the Persian wars, Athens had not been distinguished in any way above other Greek cities, but the victories she won in these wars stimulated the energy of her citizens and rendered them capable of producing the most wonderful works in art and literature which the world has ever seen. At the time when lyric poetry was gradually dying away, Athens enriched literature with the drama, the highest and most complex of all poetical compositions, and the greatest dramatists in tragedy and comedy belong to the age of Pericles."—*Schmitz's History of Greece*.

"Greek philosophy had its beginning in the seventh century B. C. In its beginning, it was an attempt to explain the sensible world—its origin and constitution—upon the basis of definite, natural fact or what was regarded as such, instead of gods and goddesses."—*Burt*.

"Perception of nature is the basis from which this early philosophy proceeds. The universal is conceived in a material form as water, air, etc. Thought makes a further advance when Pythagoras and his followers conceive the essence of things as *number*. The Eleatics, later go a step further. They abstract the great universal principle from everything material and call it pure *Being*. The next step in philosophy was taken by Anaxagoras who asks, 'Whence came the order and arrangement of the world if the atoms are only drawn together by a mechanical, blind movement. There must be an intelligent principle that directs all things. The essence of the world is, therefore, mind and not matter.' When philosophy had reached the belief that there was a spiritual force within different from the body which it ordered and ruled, man turned his attention from the investigation of physical problems to those presented by his own interior nature. It is at this stage that the Sophists began.

"Plato complains that it is difficult to define the Sophist correctly. The name was first applied to those paid teachers who pursued wisdom as a calling. The Sophist, according to Plato, is a hunter who seeks to capture wealthy young men by promising to teach them virtue. Sophistry is an art of delusion; it consists in knowing how to entangle others in contradictions, in an assumption of wisdom and virtue without possessing either.

Aristotle describes it similarly as a science limiting itself to non-essentials, or as the art of making money with mere apparent wisdom.

"Grote, the historian, exculpates the Sophists from the charge of corrupt and immoral teaching but asserts that they had 'nothing in common except their profession as paid teachers.' The real danger of Sophistry lies in the fact that the individual self is the final court of appeal to which intellect, judgment and conduct are finally referred."—*Mitchell*.

Plato was a pupil of Socrates during the last eight or nine years of that great reformer's life. Plato alone, of all his pupils, appreciated the intellectual greatness and seized the profound scientific conceptions of his master.

"The fancy which he subsequently lavished on dialectics at first overflowed in poetical compositions, epic, lyric and dramatic. But he burned his epics on comparing them with Homer, and having fallen under the influence of Socrates henceforth devoted himself wholly to philosophy."

"Somewhat late in life he opened a school called 'The Academy,' where he expounded his doctrines in conversation and lectures to a large number of pupils among whom were women disguised as men."

"Plato never married, never mingled in public affairs, and seems to have regarded the constitution and character of his native state with disfavor and almost despair."

"Socrates lived in the age of the Sophists. He is frequently called a Sophist and is held up to ridicule in the comedy of the 'Clouds,' written by Aristophanes. But his teaching is the positive complement of the Sophistic philosophy, whose destructive tendencies he vanquished on their own ground on the truth implicitly contained in their own principles."—*Mitchell*.

"Pre-Socratic philosophy proceeded from observation of nature; the Sophists first deviated from physical inquiries and made man himself a special object of study. This direction is the ruling one of Socrates. He neglects nature and occupies himself with what he calls *true knowledge*, the absolute essence of spirit."—*Mitchell*.

The Apology of Plato is an account of the trial and defense of Socrates. In what relation it stands to the real defense there are no means of determining. Socrates had been brought to trial by his fellow-citizens in Athens. Two charges were brought against him:

1. He was charged with being an evil doer and a curious person searching into all things under the earth and above the heavens; and making the worse appear the better cause and teaching all this to others.
2. He was charged with being a corrupter of youth who does not receive the gods whom the state receives but introduces other new divinities.

In answer to the first charge, Socrates quotes the Delphic oracle which had declared that "Socrates was the wisest of men" and explains it by saying that he knew nothing and knew that he knew nothing while other men knew nothing but imagined they knew all things. In answer to the second charge he propounds the inquiry, "If I am the corrupter, who is the improver of the citizens of Athens?"

"Socrates relied on the simple truth in his defense and left the issue in hands of God. He was pronounced guilty by a small majority and con-

demned to death. According to Athenian law he could express an opinion as to the punishment he should receive. But as this would be an implied acknowledgment of his guilt, he refused to name any punishment but declared himself worthy of reward as a benefactor."—*Mitchell*.

Euthydemus and Dionysodorus are two brothers, teachers of rhetoric and the art of fighting in armor. They are willing also to teach virtue for a consideration, thus coming under Plato's definition of a Sophist. Their teaching was negative in character, and they produced reasons and arguments on both sides of a question. By their reasoning they could prove all things even that which was false. Dionysodorus says: "Who lies says what is not, but one cannot say what is not—therefore no one can lie."

"The method of Socrates was a method of bringing into consciousness by any and every true psychological expedient clearly and effectively, true conceptions."

"The Socratic method was a compound of simple induction and definition and reasoning upon the principle of analogy."—*Mitchell*.

Helps in studying Plato :—A study of Greek Philosophy, by Ellen M. Mitchell, published by S. C. Griggs & Co., Chicago, Ill. History of Greek Philosophy, by B. C. Burt, Johns Hopkins University, Published by Ginn & Co., Chicago.

#### SCHOOL ORGANIZATION.

[*Note*.—The following extracts taken from Arnold Tompkins's "School Management" will be found helpful in considering this subject of School Organization.]

"A school is quite a complex object, for it includes teachers, pupils, parents, officers, tax-payers, funds, houses and apparatus. These diverse parts exist in unity, since they co-operate to one end under the moving force of a single idea. All the diverse acts of the several factors focus themselves in the one single act, the development of the child, for which all the acts are performed. Hence, the school is an organic process."

"All in all, the school is quite a complex piece of machinery. There are manifold processes to be performed besides the central one. Teachers must be examined, coal bought, the house cleaned, the record kept, classes called and questions asked—a manifold process so absorbing in variety and interests of detail, so overshadowing the little silent process wherein the miracle is wrought, that the external means become an end in the consciousness of those who teach and manage. It is sometimes a question whether the child can survive the machine."

"The physical condition of teacher and pupil must be such that they are not conscious of themselves; or better, such that their mental energy will be intensified by physical vigor."

"Under the point of economizing energy, it must follow that the lighting of the school room must be such that no effort is required through the sense of sight. Just in proportion as seeing becomes difficult or painful, is the teaching act obstructed—as well as the eye injured. This means that there must be sufficient light and from the proper direction. Light should enter the room from behind and at the left of the pupil."

"The effect of bad ventilation on the mental activity of the pupil is obvious. Drowsiness and depression weaken and divert mental energy, and prevent the fullest co-operation of thought in the line of discussion. Hence the teaching act as well as the health requires a perfect system of ventilation, and the care of the teacher as to the constant supply of pure air in the school-room."

"Such pupils as can join with the teacher in a given line of thought should constitute a class. These are determined not only by the qualifications of the pupils but by the number the teacher can grasp in the process of instruction. While classification requires unity of each individual in the class with the teacher at a given moment in the act of teaching, *gradation* requires unity of each individual with the teacher in successive moments through the course of instruction. The same pupil that joins with the teacher at a given moment may be unable to do so in successive moments; because pupils vary in ability in different subjects, and from time to time in the same subject. Gradation thus conflicts with permanence and uniformity of classification; for true classification requires constant re-adjustment of membership as much as does gradation. As a school is truly classified when the members of a class can join with the greatest profit in the same act of instruction, so a graded school is not a school consisting of two or more rooms in the same building, but a school moving over a system of ideas graded by the pupil's law of development."

"Without a systematic time schedule for the movement of the whole school, there would be delays, collisions and wrecks. The teacher must know in advance just what movements and connections are to be made during each session. Especially is all this true on the first day of school, when a special program is required. This day is not more trying simply because the exercises are irregular, but because the teacher is new and on trial before the public sentiment of the school. The systematic movement by regular program is essential to order and dispatch of work; unity of the whole being the constant and absolute requirement."

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TEACHING THE LANGUAGE-ARTS.—Dr. Harris's preface and the author's preface, together with Mrs. Campbell's comments and suggestions, are altogether so comprehensive, that the teacher will not need other commentaries on the lesson for the first institute.

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A DESERVING ENTERPRISE.—Mr. Orville Brewer, pioneer in teachers' agencies in the west, and Mr. Sherwin Cody, the well known novelist and journalist, have started a "College of Letters and Journalism." The announcement comes to us with the first instalment of Mr. Cody's "How to Write Fiction," which is to be published as a progressive course of instruction in semi-monthly parts. Courses of personal instruction by correspondence will be given in newspaper reporting and special article writing, as well as in story writing. The "College" has rooms in the Auditorium Building, Chicago.



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## MISCELLANY.

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### THE N. E. A. AT MILWAUKEE.

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The N. E. A. held at Milwaukee was a large meeting—not quite so large as on two or three former occasions—but large enough. In fact, these meetings are becoming so large as to be unwieldy. Only a few places are able to provide ample accommodations or have halls large enough to hold the audiences. And when the halls are sufficiently large, only a few of the speakers have sufficient lung power to make themselves heard. The meeting place at Milwaukee was particularly bad. The galleries had been shut off by canvass for the use of exhibitors, but the canvass did not shut out all the noise, or shut in all the sound, and as a result, almost nobody was satisfactorily heard. Many speakers were not heard by *one-tenth* of the audience.

The section meetings were very much more satisfactory and are generally reported as *good*.

Indiana's delegation was not so large as desired but was respectable, the enrollment being about 275.

Miss Mary E. Nicholson, principal of the Indianapolis training school, read a paper before the Council that was highly commended.

President Joseph Swain, of Indiana University, was president of the college section and discharged the duties of the position in such a way as to elicit much praise.

Edward Ayres, superintendent at LaFayette, was elected director for Indiana for the coming year.

J. M. Greenwood, of Kansas City, was elected president of the Association, which was a deserved recognition of long and faithful service. The secretary and treasurer were both re-elected.

The plan by which officers of the Association are nominated was changed. Instead of the president appointing the nominating committee, each state selects its own member. This will prevent "setting things up."

The directors expressed a preference for a meeting place for next year in the following order: First, Salt Lake City; second, Los Angeles; third, Washington, D. C. As usual, the final determination of the meeting place was referred to the executive committee with power to act.

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### NORTHERN INDIANA NORMAL SCHOOL.

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This school is just closing its twenty-fourth year. It began with thirty-five students and four teachers; it now averages the year through over two thousand students and employs fifty teachers. The summer term has always until this year been the light one, but the present term shows a *bona fide* enrollment of over twenty-three hundred.

The writer recently spent a day in this school and was much pleased with the work he saw. The students are usually mature and show by their cheerful and eager attention that they are there for a purpose. The teachers are selected for their special fitness in certain lines of work and only those who develop skill in teaching and show good results are retained.

Within the last year the library room has been enlarged and about 3,000 new books—mostly reference books—have been added to the library.

All the natural science departments are supplied with apparatus and laboratories and the teaching is according to the most approved methods.

The pedagogical department, under the direction of Sanford Bell is much stronger than ever before. Mr. Bell is certainly doing superior work. Some psychological apparatus has been purchased and real laboratory work in this department is being done. Mr. Bell is giving special attention to child-study and is giving emphasis to some phases not yet much developed.

Lincoln once said ; " You can fool some of the people all the time, and you can fool all of the people some of the time ; but you cannot fool all the people all the time." This statement is true in regard to a school. By extensive advertising, large promises and much talk, a few people might be induced to attend all the time, and a large number might be taken in for a short time ; but a school that continues to grow steadily for a quarter of a century must have genuine merit. Its students have always been its best advertisement. Number of graduates from teacher's department for year just closed was 285, and from all departments 839.

H. B. Brown, the President, and O. P. Kinsey, his associate and partner are both superior men, superior teachers, superior business managers, and indefatigable workers.

For new catalogue and full information address the president, at Valparaiso.

#### TREASURER'S REPORT OF THE BATTLE GROUND MONUMENT FUND.

The following amounts have been received from time to time since November 1895 :

City of Lafayette, Nov. 1895.....	\$ 43.59
Tippecanoe County, Nov. 1895.....	49.83
Supt. G. M. Naber, Columbia City, Dec. 1895.....	10.00
J. V. Cattron, Westville, Aug. 1896.....	3.70
S. A. Laird, Chalmers, Dec. 1896.....	1.50
Supt. James F. Scull, Rochester, Dec. 1896.....	3.55
M. M. Watts, Big Creek Twp., White Co. Dec. 1896.....	.50
Emma Stewart, Brazil, Jan. 6, 1897.....	.67
Alice B. Keever, Big Creek Twp., White Co., Jan. 6, 1897.....	.22
Sagie Stewart, Brazil.....	.40
J. R. Houston, Aurora, Feb. 6, 1897.....	4.25
Supt. Calvin Moon, South Bend, Mch. 27, 1897.....	63.14
Dora DeBent, Jackson Co., June 14, 1897.....	.10
J. W. Payne, New Palestine, June 14, 1897.....	.43
Sullivan County, June 14, 1897.....	.50
Tippecanoe County, June 14, 1897.....	4.61
	<u>\$186.99</u>

June 14, 1897.

WORTH REED.

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STATE SUPERINTENDENT'S ITINERARY.

State Superintendent Geeting will visit institutes as follows :

August 2-6.—Monday, Dubois County ; Tuesday, Martin County, Wednesday, Ohio County ; Thursday, Henry County ; Friday, Putnam County.

August 9-13.—Monday, Parke County ; Tuesday, Daviess County ; Wednesday, Jennings County ; Thursday, Washington County ; Friday, Harrison County.

August 16-20.—Monday, Rush and Union Counties ; Tuesday, Switzerland County ; Wednesday, Scott County ; Thursday, Miami County ; Friday, Wabash County.

August 23-27.—Monday, White County ; Tuesday, Marshall County ; Wednesday, Jay and Wayne Counties ; Thursday, Brown County ; Friday, Bartholomew County.

August 30—Sept. 3.—Monday, Jasper County ; Tuesday, Adams and Wells Counties ; Wednesday, Blackford and Delaware Counties ; Thursday, Howard County ; Friday, Montgomery County.

September 6-10.—Monday, Johnson County ; Tuesday, Clark County ; Wednesday, Posey County ; Thursday, Tippecanoe County ; Friday, Hancock County.

September 13-17.—Tuesday, Starke County.

November 8-12.—Tuesday, Steuben County ; Thursday, Newton County.

December 20-24.—Tuesday, Clay County.

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SOME FACTS AND FIGURES CONCERNING THE COMMON SCHOOL GRADUATES OF WHITLEY COUNTY.

Number of graduates in 1892 was 80. Of these, 24 have taught ; 20 have graduated from a high school ; graduates in 1893, 40. Of these 9 have taught and 14 graduated from a high school ; graduates in 1893, 77. Of these, 15 have taught and 10 graduated from a high school.

Class of 1895 had 76. Of these, 3 have taught and 46 are doing high school work.

Class of 1896 has 88. Of these, no one has taught on a license ; 41 have been doing high school work, 40 have been continuing in the common school branches, 7 quit.

Number of graduates in class of 1897 is 96. Total for six years 457. Exclusive of this year's class there are 361. Of these, 243 have done some high school work, 36 have done high school work and gone to college, 62 are still working in the common branches and 30 stopped going to school when they graduated.

As an evidence of close grading it is sufficient to say that only about 20 out of 100 manuscripts made a passing grade ; and the further fact that the average of the highest grades for the last six years, is only 84½. The average age for this year's class is nearly 17 years, which is higher than usual for common school graduates. This is certainly a good showing. G. M. Naber was superintendent.

CENTRAL NORMAL COLLEGE.

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The commencement exercises of the Central Normal College took place the last week of July at which more than one hundred graduated in the different courses. The summer term just closed was one of the best terms the school has ever had at this time of the year. The baccalaureate address was given by Rev. Horace Ogden, of Kewanna, Ind. The alumnal address was delivered by Mr. W. L. Sturdevant, St. Louis. The work of the year has been satisfactory and the college has sent out many friends who will not hesitate to speak for it. The new year will begin the seventh of September. The faculty will remain practically the same, and opportunities and advantages for the work will be improved. The new catalogue is ready for distribution to those who desire schooling in the near future. For catalogue and information address J. A. Joseph, President, Danville, Ind.

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THE Crown Point schools will open in September with Frank F. Heighway as superintendent and the same corps of teachers as last year.

STATE SUPERINTENDENT GREETING is hard at work in getting out a new edition of the school law. It is to be very complete with full index and copious comment.

W. N. HAILMANN, superintendent of Indian schools, held an institute at Omaha, Neb., commencing July 12 and closing July 17. To this were bidden superintendents, teachers and other employes of the Indian school service, as well as all others interested in Indian education. The program was most excellent.

INDIANA will hold its State Fair this year, beginning Sept. 13. The indications are that exhibitors will be numerous and that the attendance will be large. These fairs are a liberal education in themselves and the writer never fails to attend. For circular of information address, Chas. F. Kennedy, Secretary, Indianapolis.

IN THE recent national penmanship contest conducted by the publishers of the *Penman's Art Journal* of New York City, the schools of West Indianapolis, B. S. Hiser, supervisor of penmanship, take *first* rank in Indiana and *second* rank in the United States; while the schools of Richmond, W. S. Hiser, supervisor of penmanship, take *second* rank in Indiana and *third* rank in the United States. Thus, Indiana carries off nearly all the honors and prizes.

A NUCLEUS FOR A LIBRARY.—The pupils of the Crawfordsville high school are forming a nucleus for a public library. Every year a certain number of approved books are purchased with funds acquired by school entertainments and already their collection numbers about 1,000 handsomely bound volumes. When the library has attained certain proportions, it is proposed to turn it over to the city, with the understanding that an equal number of books be purchased by the city and that a certain amount be devoted each year to augmenting the library and operating it.

IN THE election of county superintendents last June, owing to irregularities in the proceedings, there were several contests. In each case suit was brought in the lower court and then appealed to the supreme court. As this court has adjourned no final decision will be reached before the middle of September, or probably October. The following counties are still contested: Vigo, Knox, Martin, Blackford, Jay. In all these cases, the State Superintendent has recognized the person reported to him by the county auditor, without expressing a personal opinion as to the merits of the case.

DEPAUW UNIVERSITY.—We have received the year book of DePauw University for 1896-97. We are pleased to notice in the statistics of enrollment an increase in the attendance of students. This increase has been very large in the Asbury College of Liberal Arts. Last year the enrollment in this college was 330, this year it is 421; an increase of 91. The attendance in all schools (counting none twice) was 710. The recent commencement was full of interest. There were 81 graduates of whom 70 were from the College of Liberal Arts. The outlook for this institution, notwithstanding the financial depression, is very encouraging.

THE Hoosier school-master is abroad. More than one hundred of him are spending their summer vacation in study at the Chicago University. Twenty-eight are from Indianapolis and nine are from Terre Haute. Every section of the State is represented. July 21 a meeting was called for all Hoosiers and more than one hundred responded. O. L. Kelso, of Terre Haute, was made chairman and Mrs. DeBruler, of Indianapolis acted as secretary. The main purpose of the meeting was mutual acquaintance. On motion of R. A. Ogg a resolution of sympathy was sent to Prof. J. M. Coulter on account of the drowning of his daughter. A committee was appointed to arrange for a social evening in the near future.

THE TEACHERS' READING CIRCLE books for the coming year are, "Plato the Teacher," edited by Dr. W. L. Bryan, of Indiana University and Published by Chas. Scribner's Sons, price 90 cts; and "Teaching the Language Arts," by B. A. Hinsdale and adapted by Mrs. Sarah E. Tarney-Campbell, published by D. Appleton & Co., price 70 cents. The first is a series of selections from Plato, accompanied by the editor's comments and suggestions. The second is a treatise on grammar, composition and reading in a comprehensive way, and Mrs. Campbell's work was to take these general ideas and adapt them to the use of the average teacher. In doing this she has given a large number of concrete examples. One member of the reading circle board in speaking of Mrs. Campbell's work commended it all highly and then added: "Her comments on chapter XIII are worth the price of the book."

HAMILTON COUNTY held its thirteenth annual contest of common school graduates at Noblesville, July 15. There were three hundred five graduates and the occasion was one long to be remembered by those taking part. Each township had two speakers, one in the district section and one in the graded section. The one receiving the highest grade in each section was awarded the county prize, consisting of \$4.50 worth of books. Each

township had in line all of its graduates, at the court house, at 9:30 a. m., and the procession started promptly at 9:45 a. m. Nearly every school officer, teacher and graduate was present, and every patron and taxpayer was invited to attend. The crowd was very large. The opening address was made by W. H. Glasscock and the class address was by Judge Ellison, of Anderson. Everything passed off in good shape. County Superintendent E. A. Hutchens is the power behind the throne.

• Do NOT fail to read the advertisements this month. Every well-posted teacher keeps up with the new things advertised for teachers and schools. The newest and best books and school helps are all advertised.

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### PERSONAL.

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A. L. GARY (and not A. L. Gray as printed last month) is the new superintendent of Rush county.

M. S. WOODS, a graduate of the State Normal, has been re-elected principal of the Poseyville schools.

F. E. ANDREWS, of Sellersburg, has been elected principal of Chestnut street building at Jeffersonville.

R. A. OGG, superintendent of the Greencastle schools, is spending his summer at Chicago University.

PROF. C. W. LEWIS, who is vice-president, will be acting president of Moore's Hill College, until a president is selected.

PROF. HENRY S. KRITZ, for twenty years principal of the Preparatory department at Wabash College, will teach next year in the Waveland high school.

W. J. BUTTON, at one time assistant superintendent of the Indianapolis schools, is now general manager of the Werner School Book Co., with headquarters at Chicago.

CHAS. N. PEAKE has been re-elected for the fifth time superintendent of the Princeton schools. This in itself is a worthy testimonial of Superintendent Peake's acceptable work.

H. M. MONICAL has been re-elected superintendent of the New Harmony schools. Mr. Monical has recently been wedded to one of New Harmony's most estimable young ladies.

D. K. ARMSTRONG, last year principal of the schools at Knightsville, is spending his summer at Chicago University. He will go to Peru the coming year as principal of the high school.

SANFORD BELL has just closed his first year's work as the head of the pedagogical department in the Northern Indiana Normal School at Valparaiso, and his work is reported as "highly satisfactory."

O. L. LYON last year at the head of the Steeleville Normal School in Missouri, has been elected to the chair of language and literature in the Missouri Normal and Business College at Springfield, Mo.

MISS MARY JOHNSON, a graduate of the State Normal, class of '89 and of I. U., class of '97, and who in the mean time spent full twelve months in Chicago University, will do high school work in Decatur next year.

NOBLE HARTER, superintendent of the schools at Brookville, is one of the few people in the State, who are making a *scientific* study of child-study. He is doing his work carefully and makes no claims that have not been well established.

MRS. E. E. OLCOTT spent a part of her summer vacation in Chicago, attending the "Training Class in the Speer Number Work." This new view in regard to teaching primary number is attracting much attention and teachers should know about it.

THOMAS CHARLES a native Hoosier, for many years a leading Indiana educator, is now in Chicago, engaged in the kindergarten supply and school supply business. Indiana teachers who need anything in his line will do well to call upon him or address him at 211 Wabash Avenue.

SUPERINTENDANT EDWIN S. MONROE will remain in charge of the schools of Mt. Vernon. Hanover College conferred the A. M. degree on Mr. Monroe at the last commencement. Mr. E. G. Bauman, a graduate of the State Normal, will be principal of the Mt. Vernon High School.

W. C. BELMAN, our good friend in charge of the Hammand schools, will have the sympathy of many Indiana teachers in the great loss that has come to him. His wife recently died leaving him to be father and mother both to two little children. We are sure the wisdom of the father and the love of the mother will not fail him as he walks alone.

AT THE meeting of the Illinois Teachers' Association, Mt. Carmel, July 1-2, Superintendents Peake, of Princeton; Monroe, of Mt. Vernon and Churchill, of Oakland City, delivered addresses. Supt. Peake's subject was the "Hoosier School Master;" Supt. Monroe's "The Indiana or Township System of Schools," and Supt. Churchill's "The Indiana System of Licensing Teachers."

J. C. BLACK, for many years superintendent of the Michigan City schools, and last year teacher of pedagogy in the Anderson normal school, has accepted the presidency of the Albion State Normal School at Albion, Idaho. Two years ago, Mr. Black took the degree P. D. D. from the school of pedagogy of the university of the city of New York. Thus Indiana loses another of her ripe scholars and experienced educators.

ARNOLD TOMPKINS has finished another year at the head of the pedagogical department of the University of Illinois, and as an evidence of his success has had his salary increased. He recently gave a course of five lectures on pedagogy in Salem, Mass. He also filled an engagement at Bay View summer school. He has thirteen institute engagements for this season, but unfortunately only two of them are in Indiana. He enjoyed his trip to Massachusetts very much. In speaking of it he says; "I never talked to a finer body of witches than I found at old Salem."

W. H. MACE, formerly of Indiana, but now of Syracuse University, N. Y., has for the past year been in Europe, most of the time at Jena, doing post graduate work. He has completed his advanced course and successfully passed his examination and will in a few weeks return to this country and be ready to resume his work in September. Dr. Mace's specialty is history and he has few equals in this country as a historian. Indiana has reason to be proud of him.

S. C. HANSON has been elected for his thirteenth year as superintendent of the Williamsport schools. It will be remembered that Mr. Hanson is the author of "Merry Melodies" and "Silvery Notes," two of the most popular school song books yet published. The first book has reached its one hundred and fiftieth thousand, and the second the fiftieth thousand. This is certainly a great success considering the competition in this line of books. THE JOURNAL extends congratulations.

SUPERINTENDENT D. M. GEETING is doing more traveling than did any of his predecessors. He is the only State Superintendent that ever visited *all* the counties of the State within a single term of office, and it is to be noted that he frequently goes more than once to a county to attend various kinds of educational meetings. He is now engaged in making his itinerary for the summer institutes and has proposed to repeat his experience by visiting again every county in the State before the close of his second term of office. Let it be noted that Mr. Geeting always has something helpful to say and some good advice to give. His visits are not perfunctory calls but helpful meetings that uniformly result in good.

DR. J. H. MARTIN has resigned the presidency of Moore's Hill College, notwithstanding the unanimous protest of the Board of Trustees. It will be difficult to find a man who will *fill* Dr. Martin's place in this capacity. The Dr. has been a leader in educational work in the State for many years. Since 1859 he has been Superintendent at Edinburg, President of Brookville College, President Moore's Hill College, Superintendent Franklin schools, Examiner of Johnson county, Superintendent Madison schools and a second time President of Moore's Hill College. All these positions he has filled with ability. Dr. Martin will continue to live in his beautiful home in the suburbs of Moore's Hill and look after his farm interests. He will probably do a good deal of lecturing as he is always in demand in this field.

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# Delicious Drink

## HOSFORD'S ACID PHOSPHATE

with water and sugar only, makes a delicious, healthful and invigorating drink. Allays the thirst, aids digestion, and relieves the lassitude so common in midsummer.

Dr. M. H. Henry, of New York, says: "When completely tired out by prolonged wakefulness and overwork, it is of the greatest value to me. As a beverage it possesses charms beyond anything I know of in the form of medicine."

Descriptive pamphlet free. Rumford Chemical Works, Providence, R. I. Beware of Substitutes and Imitations. 6-11.



FOUR GREAT AMERICANS—"Washington, Franklin, Webster and Lincoln," is the title of a little book for either home or supplementary reading by James Baldwin. The story of each is told in language suitable for the smaller children, and the main events in the life of each related in such a clear and forcible manner that the children need not be told why these men were great. The style is simple and clear and the pages are enlivened by many bright anecdotes. Mr. Baldwin has few equals as a writer for children. Read what Mrs. McRae says of him in an article in the body of this JOURNAL. See also the advertisement of Werner School Book Co., in advertising pages.

### **BUSINESS NOTICES.**

WANTED.—Agents to take subscription for magazine in connection with a saleable article. Big pay. Heeb Company, 30 Penn. St., Indianapolis.

THOSE who take the Business and Shorthand courses at the Indianapolis Business University secure good positions at once. Everybody knows it is the largest, oldest and best school in the State. 48th year opens Sept. 1.

THE MARSHALL CORRESPONDENCE SCHOOL OF LAW, 84 La Salle St., Chicago, Ills., offers a means of securing a local education by *studying law at home*. Prepares for admission to the bar or business. Send for catalogue. 7-3t.

SCHOOL BOARDS contemplating changes can learn the address of the best Western and Eastern teachers, willing to change places, by addressing Orville Brewer, manager of the Teachers' Co-operative Association, 101 Auditorium Bldg., Chicago. We can assure all who write of confidence and honorable treatment. 2-tf.

THE INDIANA KINDERGARTEN AND PRIMARY NORMAL TRAINING SCHOOL—Established in Indianapolis in 1882. Forty-five free scholarships granted each term. Two classes formed each year, one in September and one in February. For catalogue and particulars, address, MRS. ELIZA A. BLAKER, Superintendent, Indianapolis, Ind. 8-2t.

HALF FARE TO MOUNTAIN LAKE PARK, MD.—For the Chautauqua meeting at Mountain Lake Park, agents of the C. H. & D. Ry., will sell tickets at one fare for the round trip on Aug. 2nd, to 23rd, good for return until Aug 31st. For sleeping car reservations, call on or address Mr. G. W. Hayler, District Passenger Agent C. H. & D. Ry., No. 2 West Washington Street, Indianapolis Ind. Through Pullman sleeping cars and dining cars direct to the park.

LAKE ERIE & WESTERN R. R., all rail Niagara Falls excursion. Wait for the old reliable Lake Erie & Western personally conducted Niagara Falls excursion, Thursday, Aug. 5, 1897. Also Sandusky, Put-In-Bay, Cleveland and Buffalo, with side trips to Lewiston, Toronto, Thousand Islands, etc. For tickets, rate, time and pamphlet containing general information, call on any ticket agent of the above route, or address, C. F. DALY, General Passenger Agent, Indianapolis, Indiana.

SEA SHORE EXCURSION.—On July 29th and Aug. 19th, agents of the C. H. & D. Ry., will sell tickets from Indianapolis to Atlantic City, Cape May, Sea Isle and Ocean City at \$13.00 for the round trip. Tickets good to return 12 days. Two trains daily via C. H. & D. and B. & O. Route, with through sleeping cars, buffet dining cars, via Washington and Baltimore, connecting with parlor car trains for the Sea Shore, Philadelphia and New York. This is the most picturesque and historic route crossing the Alleghany mountains. For full information call on or address G. W. Hayler, District Passenger Agent, C. H. & D. Ry., or W. J. Nichols, Traveling Passenger Agent, C. H. & D. Ry., No. 2. West Washington Street, Indianapolis, Indiana.

## INDIANA SCHOOL JOURNAL.

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HAIR on ladies' faces, moles and other blemishes removed forever.  
VARIN, 25 1/2 W. Washington St. Write or call when in the city. 7-2t.

### CHLORO-NAPHTHOLEUM,

The great disinfectant for schools. Meets all requirements of State Board of Health. Reduces the sickness among children. Non-poisonous and non-explosive. Costs 1 1/2 cents per gallon, diluted. Adopted by New York, Chicago, Los Angeles, Cincinnati and Indianapolis schools.

WEST DISINFECTING Co., 31 West Market St., Indianapolis.

Reference: INDIANA SCHOOL JOURNAL, P. J. O'Meara, purchasing agent Indianapolis schools, Mr. Makepeace, Indianapolis. 3-tf.

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During August and September many positions are filled. Unexpected vacancies occur every day, and a good teacher available at short notice can frequently secure an unusually good place, owing to the comparatively small number of teachers in the field.

**Grade Teachers.** The above is particularly true of grade teachers, and we can always find positions for successful and well trained teachers for grade work.

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## PLATO'S APOLOGY: A STUDY FOR THE TEACHER OF TO-DAY.

MRS. LOIS G. HUFFORD.

In his introduction to *Plato the Teacher*, Professor Bryan gives wise suggestions as to *How to Read Plato*. To surrender one's self to the spiritual influence of a master ; to take on, for the time, his thought ; and to enter with sympathy into his feeling, is to learn to know him.

In doing this, the student will find, as Professor Bryan hints, that the seed-corn of the master's thought will germinate in his own mind, modified, it is true, by the soil into which it has fallen, but also developing his nature by the force of its own quickening power.

In reading Plato, one is likely to be first impressed by the familiar, modern tone of his ideas, even though in their unfamiliar Socratic dress. The study strengthens his conviction that "truth is one"—a universal principle governing thoughtful minds of whatever age.

It is the purpose of this article to read the "Apology" so as to translate its thinking into helpful guidance for the teacher in the school-room of the present time.

Read between the lines, *i. e.* with the inner eye and ear open to the real meaning and purpose, Plato's *Apology* is seen to be a deeply subtle discussion of the principles of education, including considerations of what constitutes the ideal teacher ; his per-

sonal fitness ; his views of life ; his method of approaching the child ; his aims in teaching. Truth, justice, love—these are the key-notes of the *Apology*—but the major tone is love ; it is love of truth and love of man that leads to justice in judging and in action. It is this absorbing love of truth, wisdom and virtue ( "The greatest good of man " Plato says, "is daily to converse about virtue " ), that Professor Bryan has in mind when he speaks of *Plato the Lover*.

The ideal teacher, according to Plato is such a lover of virtue and of wisdom. Those whose province it is to choose teachers for the children should seek for men and women actuated by this single-minded devotion to the highest good ; who prefer virtue and wisdom above self-interest. Like Socrates, the ideal teacher will be guided by the voice within ; his high-mindedness will breathe through all his words and acts ; it will be felt by every child in his school ; and so it will become the most effectual moulding influence over the lives of his pupils. Plato knew that the personality of the teacher is of first importance as an educative force.

The true teacher will be characterized by ability and modesty : pride of knowledge and arrogance in manner will be far from him. This is the real meaning of Socrates' interpretation of the declaration of the oracle concerning himself. Pride has always been "the vice of fools." Socrates was the wisest man because he was not puffed up with that pride of little learning which is "the dangerous thing." Narrowness is the logical result of such pride—that narrowness which causes him who knows one thing to constitute himself a judge of the entire range of knowledge. The politicians, the poets, the artisans, whom Socrates questioned—each and all, because they had power in one direction, thought themselves competent to pronounce judgment in every other department of life. Reverent love of wisdom and humility in view of the vast scope of knowledge, unattainable by any single mind, will make themselves so felt in the spirit of the teacher that the same virtues will be awakened in those whom he teaches. The shrewdness with which Socrates exposes the fallacy of his accuser in asserting that the laws are the improvers of men suggestively emphasizes the truth that it is not by rules, but by character and personal force in the teacher, that order is secured in school.

So, too, the duty of fidelity to conviction, whatever the conse-

quences, is shown to be a characteristic of the ideal teacher. The thing most to be feared is not death or any punishment that man can impose, but dishonorable living. "I do know," says Socrates, "that injustice and disobedience to a better, whether God or man, is evil and dishonorable : " \* \* \* "Men of Athens, I honor and love you ; but I shall obey God rather than you." The first motive principle to be instilled in the minds of children according to Plato is to do right regardless of consequences ; to obey the voice within, and "let the result be as God wills." The teacher who realizes that the end of his teaching should be the making of wise, virtuous manhood and womanhood will not limit his work to hearing the reciting of facts acquired, nor even to the imparting of new facts of knowledge ; but he will use these opportunities for arousing in his pupils a love of true wisdom. Plato makes plain his belief that what a child learns to love is of more importance than what he learns to know.

His teaching is diametrically opposed to the money-getting so often given prominence by the sordid spirit of this age which sadly confuses the means with the end. "I tell you that virtue is not given by money," says Socrates, "but that from virtue come money and every other good of man, public as well as private." This is also the teaching of the New Testament : "Seek ye first the kingdom of God and his righteousness, and all these things shall be added unto you."

A young teacher recently remarked : "In my own teaching, I constantly strive not to do anything that my teachers did." This is a sad commentary upon the methods of dealing with children practised in many school-rooms. Plato presents his arguments from the negative as well as the positive side. What not to do, is plainly taught in the *Apology*.

Since prejudice implies injustice and narrowness, first of all, let nothing be said to children that will bias or warp their judgment, or that will excite narrow prejudice. For in the impressible days of childhood and youth, whatever is taught by an elder in whom the learner has confidence is accepted. Rather trust to the force of the simple truth in leading the young mind to form just judgments of what is true and what is good.

To win children as well as men, do not express depreciatory judgments of them or contempt for their opinions ; this will arouse their antagonism and cause them to close their hearts

against future efforts to teach them. Socrates excited the enmity of many by his contemptuous sarcasm. Such a course may sometimes be necessary in dealing with men, but sarcasm should never be used towards children. To win a child it is essential to gain his confidence. The true teacher will approach the child with respect born of reverence for child-nature. Suspicion begets evil passions in the child, and outrages his sense of justice.

Naturally, healthy-minded children are keenly sensitive to injustice, and seldom mistake in their judgments of what constitutes justice. Like Socrates, they demand impartiality. As he condemns the Senate for its sweeping accusation of the generals, so do children resent the injustice of a general censure of an entire class, or an entire school, for the acts of a few or a single individual. Equally strong is their resentment when one of their number is punished, as was Leon, unheard in his own defense.

"You ought to have taken me privately, and warned and admonished me," says Socrates; and this protest against public censure for a fault is echoed in the indignant heart of many a child whose sensitive feelings have been outraged by cruelly cutting words uttered in the presence of the whole school by a harsh, impatient teacher.

The weakness and impropriety of seeking to influence the action of children by emotional appeals is shown by the refusal of Socrates to use such unworthy methods to save himself from condemnation. "I had not the boldness or impudence or inclination to address you as you would have liked me to address you, weeping and wailing and lamenting, and saying and doing many things which you have been accustomed to hear from others, and which are unworthy of me."

"Never mind the matter, which may or may not be good, but think only of the justice of my cause." Truth on the part of the child and justice on the part of the teacher, are the essentials. Teachers are sometimes too ready to accuse the child of disrespect in word or manner, and thus fail to deal justly with an offending pupil.

In educating or developing the mental power of children, the wise teacher will study the individual child, so as to adapt his teaching to secure as Plato intimates, "improvement in their own proper virtue and excellence." Knowing that the ability to use

words glibly does not necessarily imply intelligent understanding, he will not be satisfied with mere word repetition, but will seek to develop insight—real comprehension on the part of the child.

Plato holds that love of truth will give eloquence; studied rhetorical form excites no feeling. If, then, teachers themselves are sincere lovers of truth, their feeling will communicate itself to the susceptible minds of children, and will exercise the most powerful influence toward their best development.

Socrates shows a ready insight into the minds of those whom he questions: he thinks their thoughts: he gets their point of view. For this reason, his questioning is not only searching, but skillful, and compels the truth. The teacher who desires to be successful in the highest sense can not fail to receive helpful suggestion and real inspiration from a careful study of the method of Socrates with men.

The conclusion of the whole matter, as suggested by Plato, may be expressed in these words: "The teacher must be one 'who understands human and political virtue;'"—one who constantly acts upon the conviction that "the easiest and the noblest way is to be improving yourselves."

Indianapolis High School.

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## AND AGAIN—THE LABORATORY METHOD IN MATHEMATICS.

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SUPERINTENDENT C. L. HOTTEL.

In the August number of the JOURNAL, Mrs. Hornbrook felt impelled to reply to an article on "The Laboratory Method in Mathematics," which I had written for the June number. Her reply was courteous in spirit, and showed no lack of ability considered with reference to the purpose for which it was written. But courteous and able as it was, it yet appeared to me to be deficient, in that it failed to meet fully some of the points which it discussed, and fell into error in regard to others.

We ought certainly "to reconsider our plans of work in the light of educational principles with a view to striking out into new paths in those cases in which the old ones have led to failure." This statement implies the necessity of first clearly determining whether the old road needs to be abandoned or simply

repaired. If it leads directly to the desired terminus, but has been worn in a few places into ruts by careless or vicious drivers, the proper conclusion would seem to be that we should repair it rather than to strike out into a new path whose direction, to say the least, is uncertain. I think it is the consensus of educators that mathematics is, and has been for years, the best taught of all the subjects in the public school curriculum. This fact, however, may or may not be greatly in praise of the method of teaching this subject. The method must stand by reason of its own merits or fall from lack of them. That improvements upon it should be made, all will agree; but that it should be abandoned for the laboratory method, many will seriously doubt.

I am in hearty sympathy with the somewhat general effort now being made toward an increase of knowledge along the lines of psychology and pedagogy with the view of reforming our methods, but remembering the history of all educational reforms, I am justified in believing that we are carrying with us a great deal of highly treasured psychological and pedagogical nonsense which the experience of the next decade will compel us to cast away. In this sense I shall venture the statement that "*we are* studying a great deal of psychology and pedagogy for nothing." All things labeled "pedagogy" are not genuine.

It is hardly necessary to state that under the class method an "equality of results" is neither required nor expected. No one affirms and no method with which I am acquainted requires us to believe that two boys of unequal mental ability, other elements and conditions being equal, will or can accomplish equal results in equal time. The class method demands, as every one knows, simply that a fair standard of measure shall be used in determining the graded course. When this measure has been fairly satisfied, class promotion is made without reference to an equalization of results.

"Can anything be more discouraging to a weak pupil than to go on for a year or even for a half year and then fail of promotion?" Yes: To be virtually put out of the class by the grouping method, after two or three weeks ("In a short time") except for a few minutes at the close of the recitation period; to have one's work reviewed by "inspectors" and "examiners" selected from some "bright group," who thus obtain the "benefit of a review," and then to fail of promotion at the end of the year or



when the bright group is promoted. There is sometimes failure of promotion under either method. In the one case the difference between the dull pupil and the bright pupil is measured by pages and chapters; in the other it is measured only in the mind of the teacher. The one is a definite public measurement seen and known by the entire class; the other is not definite for pupils are not capable of definitely estimating one another's advancement or development. With reference to the few pupils who, under the class method, fail of promotion, nothing more than an indirect announcement is made.

It is hardly correct to say that "none fail entirely of promotion," unless we use the word promotion in a sense different from that in which it is commonly used; namely, advancement from one grade to another. When a dull pupil is not thus advanced at the time at which the bright pupil is advanced, he fails of promotion. To say that he is advanced afterward, is only to say what can be said of every dull pupil who completes his work under the class method.

"Under the class method it is common for a pupil to come into a geometry class unprepared, hoping to catch the demonstration from others before his turn comes." This is the fault of the teacher, not the system. A teacher who has not wit enough to prevent such a practice from becoming "common" under a method that for years has given good results, would make sad havoc of school work under a method confessedly "not practical in a badly disciplined class."

Again: "In that case he is likely to get some very poor teaching and to furnish some of the same kind to those who listen to him." It is with considerable astonishment that I find a teacher possessing the clear discrimination which Mrs. Hornbrook usually exhibits, mistaking such a recitation as the one just described, for teaching, especially just after taking the opportunity to announce perfect agreement with my statement that pupils are not teachers.

Unfortunately she falls into another error of a somewhat similar character when she says, "The laboratory method in natural science instruction is almost universal." If by "laboratory method" is here meant the particular method under discussion, I beg leave to question the correctness of the statement. Laboratory work in a physical or chemical laboratory is a thing very

different as to method from what is called the laboratory method in mathematics. I think it is a fact unquestionable that the classes now working in the physical and chemical laboratories of Indiana are working under the class method. If Mrs. Hornbrook uses the phrase, laboratory method, as it is commonly used, to denote work done in a laboratory, her argument loses its force.

As to the question whether or not the new method would destroy (not modify) the graded system, no discussion was made in the reply to my article. If the two prominent principles of the new method, that of grouping according to the mental ability of pupils, and that of causing them to be advanced according to the same standard, are carried out, it is difficult to see how grades can be maintained. By the operation of the first principle applied in all grades and to all subjects to which it is equally adapted, an approach is made so close to the old-time system of having one pupil in a class, that all hope of maintaining grades is destroyed; by the operation of the second principle all chance of promotions at stated times is taken away, and the more than twenty-five years of experience we have had with this system, has demonstrated that stated promotions are essential to its existence. This is a fair statement of the conditions which would result in three or four years from a full and logical application of these two principles. It is a question of destruction rather than of modification.

But it may be replied that thus far in the history of the laboratory method these results have not appeared. Then, if logical relations can be relied on to produce correct conclusions, either these two principles have been violated in whole or in part, or the application of them has not been made to a sufficient number of subjects or to one subject a sufficient length of time, to indicate results.

I am compelled to acknowledge that, in conscience, I can not avail myself of the easy escape from censure, courteously afforded me by Mrs. Hornbrook through the very innocent and gentle term, "misapprehension;" for I had read in the *American Education Bulletin*, No. VI, to which she refers, that a part of each recitation period was given to work with the class as a whole. But finding only two lines (the ones quoted in her reply) devoted to this announcement, in the entire bulletin of more than fifteen pages, I was, perhaps, not sufficiently impressed with the truth

that "the discussion in open class of principles and theories and of their special applications to problems and demonstrations" was a marked feature of the new method. I am glad to note that Mrs. Hornbrook in her reply hastens to emphasize the fact of such discussions. This feature, of course, I fully endorse as in every way worthy of retention and prominence. It is hardly sufficient to warrant an endorsement of the whole system, for the small portion of time allotted to this most important of all features is evidently so brief that the purposes of a recitation in which all the pupils receive help and guidance from the teacher (not "inspectors" and "examiners"), essential to their development, seem almost entirely defeated.

Portland, Ind.

## CLOSER SUPERVISION OF THE DISTRICT SCHOOL.

W. B. SINCLAIR, EX-SUPERINTENDENT OF STARKE COUNTY.

[To have been read at the Northern Indiana Teachers' Association at Elkhart and published in compliance with a resolution adopted by the County and Village Section of that body.]

The problem of district supervision has been receiving much attention for the last few years because of the evident need of improvement in that direction.

It is not the purpose of this paper to present an argument in favor of close supervision of the rural schools. The need and economy of it are too apparent to need discussion.

A plea for better supervision, giving the supervisor more time, better facilities, better qualification, can but touch a responsive cord in the experience of every district teacher. The cities of this country worked out the problem of school supervision just as the free cities of Europe solved the great questions of civilization. As early as 1834, the city of Buffalo inaugurated a system of supervision and was soon followed by New Orleans, Baltimore and Brooklyn.

City supervision is closely related to the rural and any argument in favor of the former is applicable to the latter. They are based upon the same theory only the conditions are such that both the need and the difficulty of the rural are greater than the city. Thoughtful business men as well as school men very wisely concluded that if supervision was economical for the city and ren-

dered their schools much more efficient it would also have a like effect upon the rural school.

A history of the inception and growth of this idea is interesting in that it shows the growing tendency of non-school men to regard teaching and especially supervising as a profession. The supervision of county schools has now become so general that nearly every state and territory have adopted some form of it. Seven states have township supervision, three have a district system. In Louisiana, Mississippi and West Virginia these two systems are combined, and in thirty states and territories there exists some form of county supervision. This great diversity shows that all feel the need of some system and are blindly searching for it but that no plan, pre-eminently better than all the rest, has, as yet, been devised.

Like the hero in the romance, the county superintendent, or some one similarly empowered, is the most important factor in rural supervision. In the Indiana system, the diversity and multiplicity of duties devolving upon the county superintendent are barriers in the way of thorough supervision through frequent visitation. His functions are quadruple. As a county officer, he has a judicial, legislative and executive function concerning much local law and regulation. His work is part clerical as book-keeper, report maker and statistician for his county. His work is part clerical, part professional and part judicial in the grading of manuscripts and granting of license. His supervision of the schools through visitation and teachers' meetings is almost entirely professional and should be his chief duty. As it is, he can only give such time to the latter as he can spare from the former duties. The amount of good he can accomplish, ability and zeal being equal, depends upon the amount of time at his disposal and the number of schools under his care. Though the power to grant license and the duty of school visitation be vested in the same individual, the former can not be exercised judiciously without the latter. In counties where the large number of schools render it impossible to visit all, how can the superintendent do more than guess at success, yet that item counts as much as scholarship which may have cost the applicant much study, time and money.

A close supervision must begin with the careful selection of an eligible list of applicants from which trustees can employ

competent and faithful teachers. This eligible list should contain the names of all teachers who have been tried and found to be capable, willing and faithful and should be re-inforced each year by new blood coming into the profession, either as young, energetic beginners or successful teachers from other counties or states. The possibility of the general success or failure of the schools of the county depends so directly upon the character of the teaching force that quality must be made to count for more than quantity, hence a system of pruning must be constantly employed. There are those to be kept out of the profession who are not qualified to enter it. Others there are who must be eliminated from the list of eligibles because of the apparent symptoms of premature professional decay and death.

The efficiency of the teaching force will depend upon the supply and the superintendent's ability to discern and select the most competent applicants and to organize and put them upon the highest professional basis. All this requires a student of human nature, with the power to plan, execute, direct, teach and organize chaotic elements. He must understand the machinery of the school in every phase and the fundamental principles underlying it. He must have power to inspire others, not that he can give scholastic education nor professional training, but he can direct the beginner, check the adventurer and stimulate the laggard. A high authority has said that instruction is of little value and perhaps vicious unless it is professional and scientific.

The superintendent can not make the work professional nor scientific in the true sense but he can do something in that direction. He can accomplish much in directing the exercises of the county and township institutes, the teachers' meeting and the Reading Circle into the channels most helpful to his teachers. One of the most apparent needs is more frequent township teachers' meetings with the superintendent or some competent teacher to direct the exercises. This would offer opportunity to discuss and work out many questions of government and method arising in the experience of teachers.

It is through all these avenues that the superintendent must direct, stimulate and lead to higher endeavor and better results. He is supposed to discover if any teacher is getting dangerously near the professional dead line and to either work the miracle of regeneration in his case or make an easy way for his escape from

the profession. The teacher who has passed his climax is no longer the most useful in the school-room. It takes life to beget life; it requires growing thought to stimulate and direct thought in others. Those teachers accomplish most who are themselves in the midst of a healthy intellectual growth.

It is a large part of the supervisor's duty to discern the professional condition of teachers and make their growth as general as possible by encouraging them to attend good schools and utilize helpful books and journals devoted to their profession. The visitation of the school though most direct is not more important than the selection of the teacher. It furnishes, however, an opportunity for observations which can be discussed with the individual teacher or made the text for helpful suggestions at the next teachers' meeting.

I believe of all the phases of our school system that of supervision is susceptible of the greatest improvement because it lacks most of having reached the limit of its possibilities. It is the last function to be added and some even now consider it a useless innovation.

Visitation is purely professional and is a waste of time and money unless the supervisor is able to see through the school, see its unity and the secret of it; its discord and the cause of it, and be able to suggest a possible remedy if the latter exists. He should be able to determine, if good order exists, whether it is an enforced obedience to law behind which is an iron hand or the willing compliance of pupils to just and equitable rules. The visit gives the supervisor an opportunity to judge also the teacher's ability as an instructor—whether thorough or superficial—whether principles are mastered or surface skimmed.

A critical study of the teacher and her work will not always solve the problems encountered. She may be qualified as to scholarship and sound as to methods yet the environments of the pupils and the conditions of the school in general may be such that a high grade of success is impossible.

The young teacher particularly needs the frequent visits and frank criticisms and suggestions of the competent supervisor, but unless visits can be frequent it is almost unsafe to suggest radical changes. The teacher may not have the ability or facility to carry out the reform or she may go to such an extreme that the last state of the school will be worse than the first. It is not

possible to give teachers a recipe for each of the ills of the afflicted school, because the condition of the occasion must determine the remedy and like the miracle at the sacred pool can only be performed while the waters are troubled.

The increased attention and discussion devoted to this subject is a hopeful sign that its needs are becoming more apparent and it is to be hoped that some means will be devised to render it more efficient. Great advance can not be expected until the number of schools under each supervisor is so limited that he can visit them more frequently and remain longer and thus come in closer contact with both teacher and pupils, discovering their needs and giving them the benefit of his superior knowledge and professional experience.

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### TEACHING IN COUNTRY SCHOOLS.

J. STOMMEL.

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In four successive years, four excellent treatises in "Methods of Teaching" have been placed in the hands of the Indiana teachers. The first one, "Page's Theory and Practice of Teaching," though not up to the latest ideas, is a very practical book. De Garmo's, Tompkins's and McMurry's treatises are able expositions of the teaching process in accordance with the most advanced ideas of our day.

In order to get the full benefit of these three books, the teacher must study each one carefully and compare the ideas they present. He, then, should make these ideas part of his own, and put them into practice. By the mere reading of "DeGarmo" and "Tompkins" many a teacher may fail to discover the great similarity of the ideas given in them; but a comparative study of both will prove the fact. The question now arises, "How can we put these ideas into practice?" This can be very easily done by using the "Topical Method" as laid out in the State Manual.

Having made up our minds to follow the state outline, and having chosen a topic from it for our lesson, we should first bring into consideration the grade of the pupils before we begin planning our lessons. For convenience we may divide our country schools into two departments; namely, Primary (the first four grades) and Grammar Department (the last four grades).

The teacher need not plan the purpose of the lesson, this being predetermined—all subjects having one universal purpose, the attainment of physical and spiritual freedom ; and each one a particular purpose, readiness in the use of it. The first thing, therefore, the teacher has to do is the bringing into consideration of the nearest related knowledge possessed by the children, which he can use as a basis for the new lesson. He then is ready to begin with the mental steps the pupil is to take in mastering the lesson.

There are three steps the mind takes in acquiring knowledge ; namely, (1) the apperception of new facts in preparation and presentation ; (2) the transition from individual to general notions, whether the latter appear as definitions, rules, principles, or moral maxims ; and (3) the application of these general truths to concrete facts. The new facts, or the subject matter, to be taught should be thought of as an individual. Every individual may be considered in a fixed and in a changing condition. A pyramid, a poem and a problem in arithmetic are usually considered as fixed in the grades we are to teach ; a battle and a topic in physiology as changing ; while a city and a river may be considered as fixed and as changing.

To a primary grade the object must be presented as a mere picture, but to a grammar grade it must be presented in its narrow circle of relations. (See 'Tompkins's Philosophy of Teaching, pp. 154-162).

After the apperception of the new facts, the teacher by induction passes from the individual to the general notion ; *i. e.*, he develops the definitions, principles, rules, or moral maxims. Then by deduction, he applies these general truths to concrete facts. After the teacher has planned the lesson, he is ready to teach it. In finding out the nearest related knowledge, he may use a few pointed questions. In presenting new facts to a primary class, he may use the monologue ; but in developing general truths and in applying them, the dialogue is important. External objects, blackboards, etc. should freely be used during the whole process. As regards the particular methods for each subject, the teacher does well in following the hints and suggestions given in the text books, the state manual, and those in the books recommended by that manual.

There are also two so-called methods with regard to the sub-



ject-matter ; namely, the analytical and the synthetical. But as we can not do better than to present the subjects as outlined in the state manual, we need not bring them into consideration. Moreover, the essentials of method may be observed with either of the processes.

Every subject-matter we teach may be considered as an art and as a science. In penmanship, drawing, oral reading, spelling, and the fundamental rules in numbers, in which mechanical ability is a great desideratum, a good deal of mechanical teaching is necessary. However, the theory of these subjects should precede the practice. In the "science studies" blackboard illustrations should also freely be used to aid the memory and to develop obscure points. The teacher then should clearly see the natural relations and interdependencies existing between different branches of study. But here he must be careful not to be led off too far from the subject he is teaching. If he were to explain the battle of Tippecanoe (history), he should locate that place, and the surrounding country if necessary ; but he should not teach any more of geography than necessary. The same should be observed in regard to geography when teaching history.

However well we may teach, teaching alone will not suffice to fix knowledge in the pupils' minds. The teacher must drill after new facts are acquired, test and review. In those studies in which mechanical ability is the chief end, more drill is required than in the science studies.

If we follow the advice taken from the above mentioned books, *i. e.*, if we plan our lessons well beforehand, so that we know just what to do and how to do it ; if we cultivate the good habits spoken of in "Page's Theory and Practice of Teaching" and put them into daily practice, we shall teach with better results, and the bi-monthly examinations will be pleasing exercises for pupils and teachers.

Hanover Center, Ind.

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'Tis the radiant rare September,  
With the clusters ripe on the vine,  
With scents that mingle in spicy tingle,  
On the hill slope's glimmering line.

And summer's a step behind us,  
And autumn's a thought before,  
And each fleet sweet day that we meet on the way,  
Is an angel at the door.

## MILLY HUNTER'S STORY.

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ESTHER CONVERSE.

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The child told it pathetically. It is not possible to reproduce the forcible school-girl expressions ; and the gestures, often dramatic, that accompanied these, will be lost to the reader.

Milly held in her hand a package of photographs with which she had been entertaining me, her mother's guest. A face attracted my attention. "It is my teacher, Miss Cuyler," said Milly, regarding it lovingly. "She is just splendid—but, Miss Layman, would you believe, *can* you believe that we really hated her when she first came to our school ! Shall I tell you about it ? It isn't much of a story but it began when Miss Giles went away. Miss Giles was lovely, and when she went away we didn't want to love anybody else. We were determined not to like Miss Cuyler, and made ourselves as disagreeable as possible. The boys—you ought to have seen how the boys behaved ! By and by, as Johnny said, Miss Cuyler "got her back up" and began to scold and punish awfully, but it didn't do a bit of good. We just hated her and wouldn't behave. But something happened one day that turned us all around, and that's what I want to tell you about—that one day last winter. One morning when we went to school the boys in the school yard were pelting each other with frozen pieces of food and griddle-cakes that had been spilled from one of those horrid little wagons that go slopping everywhere.

There was a new boy in school—Chuddy Hopkins ; isn't it a funny name ! Nobody knew anything about him only that he lived in Lumber Lane. He looked awfully poor. He wasn't the worst boy in school but things seemed to fall upon him. Don't you know how it is sometimes ? You are caught yourself when you don't deserve it half so much as some other girl. It used to happen that way to Chuddy ; every little thing he did was found out, and pretty soon Miss Cuyler thought he was the mischief-maker. Chuddy was bad, but then Miss Cuyler was horrid ; every boy and girl thought so.

The morning I am going to tell you about was one of the very worst mornings. You know how it is some days ; it's hot or it's cold, and you feel miserable. Funny things happen to make you

laugh, or you get mad with the teacher or somebody, and nobody has a lesson, and by and by everybody is cross and naughty. I wonder what makes such days! If I were a teacher I'd just let the children go home if I couldn't improve things. That's the kind of morning we had before this dreadful thing happened to Chuddy, and Miss Cuyler was awfully cross. I haven't told you that somebody had been taking our lunches; we couldn't leave a thing in the cloak room. Just after recess Morgan Hubbard told teacher that Chuddy had stolen his lunch, and was eating it in school. We all looked at Chuddy and such a guilty face he had! He denied it, but he looked as if he had taken it. Morgan said he was hiding it under his jacket and that he had seen him take three bites.

Miss Cuyler pounced upon Chuddy as usual, and told him to come to her. Chuddy wouldn't go. He sat near the front, and Miss Cuyler just pulled him out of his seat to her table. I can't tell you quite how it happened, but when he refused to unbutton his jacket, she jerked him around—you wouldn't think she could be so strong—and the poor old jacket came all apart, torn off him, and there Chuddy stood, naked to the waist! He hadn't a bit of shirt or anything; and—I almost can't tell you about it—I want to shut my eyes when I think of it; for right across his back were great red marks where he had been whipped!

On the floor with the old jacket lay pieces of those old griddle cakes the boys had been throwing at each other. The room was perfectly still. Some of the girls cried. You ought to have seen Miss Cuyler. She didn't cry, but her eyes were full of tears, and her face grew white. She stood a moment looking at Chuddy. Then she put her arm very gently over his shoulder and said: "Chuddy I beg your pardon; I ask your forgiveness for my unjust suspicion and cruelty." Then she told us she had treated Chuddy unjustly, and would try to make amends. I can't tell you all she said, only that we were excused. We went out softly, and were too frightened to stop and talk with one another about it.

We've been good friends with Chuddy ever since. He wore a new suit when he came to school again, and Miss Culyer found a place where he could work for his board, so I don't think he is ever hungry now. He is a real good boy and none of the boys

trouble Miss Culyer. But, then, Miss Culyer has been very different ever since."

Milly still held in her hand the photograph. Upon its back, closely written in the school-girl hand, were lines Milly had copied from a scrap found in one of Miss Culyer's books. "I think she wrote them, for I am sure they are her own thoughts," said the child, as she asked permission to read them to me.

"They are such tiny feet!  
They have gone such a little way to meet  
The years which are required to break  
Their steps to evenness and make  
Them go  
More sure and slow.

They are such little hands!  
Be kind—things are so new, and life but stands  
A step beyond the door-way. All around  
New day has found  
Such tempting things to shine upon, and so  
The hands are tempted oft, you know.

They are such fair, frail gifts!  
Uncertain as the rifts  
Of light that lie along the sky—  
They may not be here by and by.  
Give them not love, but more, above  
And harder—patience with love."

"Miss Culyer does just that," said Milly, "she gives us lots of patience and love, and we think she is the best teacher in the world. Mother says if all teachers could see under the jackets and into the homes of the children, perhaps they would be as nice as Miss Culyer. She says perhaps Chuddy's heart ached more than his back, and that he was more hungry for love than for food. How could a boy learn lessons and be good when he felt like that?"

I shall not forget Milly's story. When I see the ill-clad body and sullen face, I see in imagination the dreary home, the scarred back, the cold, hunger, and misery that make a larger part of the lives of many children. Let us give them—

Not love, but more, above  
And harder—patience with the love.

—*N. E. Journal of Education.*

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**DEPARTMENT OF PEDAGOGY.**

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**SIX-YEAR-OLD PUPILS.**

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F. M. MCMURRY, SCHOOL OF PEDAGOGY, UNIVERSITY OF BUFFALO.

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The most pitiable sight in a country school is that of the little children idling away their time until they are called upon to recite. The larger pupils being able to read or study books are likely always to find employment during the school hours, but the small children as a rule recite for a few minutes, and then wait an hour; again, they recite for a few minutes, and then wait an hour, and so on. The result is that the greater part of their time is spent in doing nothing. There would be little injury resulting from this fact, provided they were allowed to talk freely with one another, run about or play various games, but the sober school work of other pupils forbids this conduct. The result is that these young pupils receive a daily training of at least three hours doing positively nothing. If there is anything at all in the force of habit, we might well expect them to be idlers when they become older.

The teachers themselves are conscious of this defect in their work, but they find it difficult to overcome it. Having from twenty to thirty classes per day, it is impossible for them to give much time to the beginners, and since these latter cannot read little apparently is left for them to do.

However, this state of affairs is certainly a dangerous one and destructive of many of the qualities which teachers are most anxious to induce in their pupils. Consequently instructors should be bold in adopting remedies for this situation. There are several different means that are well adapted to this end. One is to allow the children to go out doors a good portion of every nice day. There they can be active and are free to educate themselves. Teachers now and then do this, but it should be more generally recognized among them as a proper thing to do. However, during the winter season there is a great portion of the time when it is not feasible to send these little people out of doors. What can be done to occupy their minds and hands so that they will not be dulled by sitting still? The crying need is more thought work or more rich thoughts for these children. While

sitting in their seats they have nothing with which to occupy their imaginations, at least the school has furnished little for that purpose. These children would be greatly aided if, aside from their reading, spelling, and number work, they could have a daily study called literature. Its object is entirely different from that in reading. The latter aims to acquaint children with the *symbols* for thought, the former would aim to present an abundance of interesting thought to them through stories. In all parts of our country there is a great movement in favor of the introduction of imaginative stories into the schools, especially for the younger children. This movement has not yet sufficiently influenced the country schools; but there are excellent books containing stories suitable for these pupils, and the country teacher could greatly strengthen his work if he would make up his mind to use them abundantly. One such book is "Classic Stories for Little Ones," published by the Public School Publishing Co., Bloomington, Ill. Horace E. Scudder's "Fables and Folk Stories" is another, or the Riverside Primer and First Reader, published by Houghton, Mifflin & Co. The latter half of this reader contains many good stories.

As to the method, the better plan to follow would be for the teacher to get fully into the spirit of one of these tales, and then relate it with animation. But even if she read it from the book it would be highly appreciated. The separate points of value in such instruction are worthy of especial notice. Many of these stories contain excellent underlying thoughts,—thoughts that influence moral character. Often they are quite new to the children. Here, then, is a means for exerting a strong moral influence, provided the instructor leads the children to comprehend the underlying thought well and apply it to their daily living. Second, these stories are highly imaginative, and thereby form a striking contrast to the other school work of little folks. The children enter school with a strong tendency to personify and build living pictures. School instruction has ordinarily done nothing to continue or encourage this important tendency. In consequence pupils gradually lose this power, until they are unable to picture vividly a new situation such as history, literature, and geography continually demand. But if literature is given abundantly to the little children this imagination is kept alive, nobility among ideas is preserved, and a greater fertility of

thought is the result. Third, the language of country children in many respects is very poor, and the stories furnish a means for its improvement. Now if after the children have heard a story or a section of it, they are required to reproduce it, and if this reproduction constitutes an important part of this instruction, they are receiving one of the best language exercises possible. Their selection of choice words, their fluency of speech, and even their ability to follow a connected line of thought are greatly improved.

Finally, a study called literature, in which a daily recitation of twenty minutes is given, will aid much toward engendering a taste for good stories or good literature. This is one of the finest possessions which the school can give to a pupil,—a genuine love for excellent literature. It is plain, then, that both the morals of children, their imaginations, their language power, and their attitude toward literature are directly involved in this study. The first objection that teachers urge against it is that there is no room on the program for it. But if it were necessary it would pay teachers to spend less time upon reading and spelling and number, especially the latter two, with the young children in order to get time for this one subject. The first need in this primary instruction is to give children something to think about and to talk about. At present the majority of the country schools are not doing that, with their youngest pupils; but if it is done, these pupils will be liver minded in their other work, and thus time will really be saved instead of lost.

Two suggestions have now been made in order that young children may not sit idle so much of the time in school. One is that they be allowed to play out of doors as much as possible. The other that this study, literature, receive daily attention, being regarded as seriously as arithmetic or geography. One other thought. If such literature as this is offered it makes an abundance of seat work possible. After children have heard a good story they will be glad to represent it either with chalk at the board or with charcoal or lead pencil on paper, or with slate pencil on the slate. Almost any six-year-old pupil will without hesitation attempt to tell a story with chalk or pencil. Older pupils will not draw so readily, because having waited so long they have made up their minds that they cannot draw. Little children have not yet become convinced of that fact at all. Before

they ever enter school they draw very freely, telling all sorts of tales by their sketches, and they will continue it at school if they are given a chance early. They enjoy paper cutting also, and if each child were given a pair of scissors, he would be quite active in cutting out of old papers or any blank paper the forms of fruits, animals, Indian tents, men with bows and arrows, etc., etc. Again if they were given shells or pebbles they would be glad to arrange them in various forms so as to present some beautiful figure or tell a story of some kind. Kindergartens and primary schools are at present making great use of sand tables, and if a country school had nothing else but a good sized sand table, that would be enough to keep the little children busy during their spare hours. They could make all sorts of objects and represent whole stories in the sand. Here, then, are several kinds of employment which would follow very easily, provided the children were receiving stories frequently from their teacher. As far as expense is concerned all that one would need would be the sand and a table, or some scissors, or some chalk, or all of these. An energetic teacher can easily provide the school with such objects as these without expense to herself.

So much is dependent upon the children's impression of the first two years of school that teachers and superintendents should plan more seriously than they do to keep the time of these young children occupied in a thoroughly profitable manner. It is a very serious matter indeed whether these little people are offered literature or not in the school, and whether they have an abundance of busy work between their recitations.

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Two ladies were driving last vacation and came to a beautiful pond of lilies. A small, ragged boy was paddling in a boat close by the shore.

"Will you get us some pond-lilies and have them ready for us to-night?" asked the ladies.

"Yes'um," answered the boy with alacrity.

Night came. An accident occurred and the ladies could not meet the boy at the pond trysting-spot. They were troubled over it. It seemed like a breach of honor to the boy, and that was bad character training. Next morning, at a great inconvenience, these ladies rode nine miles to keep their word. "He was so respectful to us," said one of the women, "and he may not be to the next people that ask him, if we disappoint him."

The boy and the lilies were waiting. A breezy little chat took place as the lillies and some pieces of silver changed places in the boy's palm. The freckled face looked happy and the long drive home in that dusty morning was not minded, for *faith had been kept*.

These two ladies were teachers and were accustomed to put their consciences into their work. Do you think such teachers would need a separate place in their program for ethics?—E. D. K. in *Primary Teacher*.



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**PRIMARY DEPARTMENT.**

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the  
Anderson Schools.*

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**THE SILKWORM.**

Silkworm, on the mulberry tree,  
Spin a silken robe for me ;  
Draw the threads out fine and strong,  
Longer yet—and very long ;  
Longer yet—'twill not be done  
Till a thousand more are spun.  
Silkworm, turn this mulberry tree  
Into silken threads for me.

All day long, and many a day,  
Busy silkworms spin away ;  
Some are ending, some beginning,  
Nothing thinking of but spinning !  
Well for them ! Like silver light,  
All the threads are smooth and bright ;  
Pure as day the silk must be,  
Woven from the mulberry tree.

Ye are spinning well and fast ;  
'Twill be finished all at last.  
Twenty thousand threads are drawn  
Finer than the finest lawn ;  
And as long, this silken twine,  
As the equinoctial line !  
What a change ! The mulberry tree  
Turneth into silk for me !

—*Mary Howitt.*

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**NATURE STUDY.—FIRST YEAR.**

The following work for nature study for the first year has been suggested by one of the leading city superintendents of the State. There is an abundance of material and a sufficient variety to be suitable to either a district or graded school. It is not necessary that *all* the work suggested be done, but some of the work, and a good share of it should be done,

It is the purpose of the nature work of the first year that the child shall use his eyes, ears and hands more intelligently ; that he will not be satisfied with a cursory examination of a plant, animal, or stone, but that he will be continually meeting each with a question ; that he will come to look upon the most com-

mon of objects with interest, for each bears some great secret of its own life.

It must be remembered that the child can be exhausted much more quickly than can the subject under investigation, and work on any one subject should not be continued to the point of the child's exhaustion. In connection with any particular object studied, it is very helpful to bring any little myth or story that bears upon it and which makes the work more clear or more interesting.

#### A.—PLANT LIFE.

1. Autumn fruits—peach, pear, apple, grape, etc., as types.
2. Autumn leaves—make collections, study forms, colors, etc. Draw singly, in groups, make in clay, cut out of paper.
3. Autumn flowers—golden-rod, aster and gentian. Not so much an analytic study of the flower itself as a study of its home surroundings, its adaptation to its place of growth, and the elements of its beauty.
4. Autumn seeds—make collection, study dissemination by winds, animals and currents of water.
5. Preparation for winter as shown in buds and leaves—make collections of buds—hickory, buckeye, maple or fruit trees.
6. A little study of the evergreen about Christmas time.
7. Preparation for spring. *a.* Planting of seeds in school-room—peas, wheat, oats, corn in earth, sand and water. *b.* Observation of germination and growth.
8. Determination of parts of plant—root, stem, leaf, bud, flower.
9. Learning to know common flowers.

#### B.—ANIMAL LIFE.

1. Insects—transformation of, collection of cocoons.
2. Lessons on cat, dog, horse, cow, squirrel, robin, black-bird, woodpecker and chicken. Observe, compare and describe their covering, parts, food, care of young. Illustrate their habits by stories.

#### C.—PHYSIOLOGY.

Learn to name and locate the parts of the body, head, neck, arms (right, left), hands, feet. Study movement, use and care of each part, show how each is adapted to its use. Kindness—how shown by hands, feet, lips. Simple lessons on eating, drink-

ing, bathing, breathing, sleeping with special reference to hygiene and right habits, self-control in eating and drinking.

#### D.—GEOGRAPHY.

1. General position—direction and distance; observation and placing of objects as above, below, on right side, on left, inside, outside. Also learning the four cardinal points of the compass and semi-cardinal directions.

2. Forms of water-cloud, fog, mist, rain, dew, frost, snow, ice; observation of the forms as they occur and where they occur to recognize each and to find the more obvious qualities and uses of each.

3. Winds—temperature, to recognize by feeling the degrees hot, warm, cold; velocity; to recognize the effects of the calm breeze and the gale.

#### E.—WEATHER STUDY.

The following questions suggest what kind of weather observations may be made by pupils in primary grades:

1. Was there any dew this morning?
2. Was there any frost?
3. Was there any fog?
4. Is it cloudy or clear? (It may be partly cloudy.)
5. What is the direction of the wind this morning?
6. What kind of a night was last night? (It was cold or warm or pleasant. It was a rainy night or a windy night or a dark night or a starry night or a moonlight night.)
7. What kind of a day is this? (It is cold or warm or pleasant. It is rainy or fair. It is cloudy or clear. It is bright or dreary.)

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#### FRUITS.

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*To the Teacher:—*

Though the talk is more upon the apple than upon fruits in general, it is better for the sake of comparison, that the teacher should have, besides apples, a pear, peach, plum and grapes and other fruits, as convenient. The best illustrative object would be a small branch bearing both fruit and leaves. A colored picture of the apple blossom will also be needed.

Let the children first name the fruits as you hold them up one by one. Question regarding the colors. Let some of the chil-

dren distinguish the fruits by touch alone, following this test with questions upon the shapes. Contrast the velvety skin of the peach with the smooth skin of the apple and pear. Let other children name the fruits by the sense of smell, and others by the sense of taste, either now or later, during the games, or at lunch time. Take care that each of the exercises is profitable, requiring the child to discriminate by his own sense alone.

#### THE TALK.

Where did the fruits come from? (If the children get beyond "the fruit stand" and give the general answer, "from the tree," lead them to notice that each kind of fruit comes from its own kind of tree.)

Do you think it takes the apple tree a long time to get the apples ready? Indeed, it does, a long, long time. Some of the children may remember the apple blossoms in the springtime. (Show picture of apple blossom.)

When the pretty pink and white petals dropped off the stem, there was a tiny, hard, green knob at the end of it, and all the spring and all the summer this little green knob grew and grew and grew. Finally, late in the summer or autumn, the apple was full grown and ripe. (A series of quick drawings, showing the gradual enlargement of the growing apple, will interest and impress the children if done in a spirited manner. The first figure of the series could be drawn with green crayon and the later ones with red and yellow, or whatever would best represent the ripe apple which you have shown them.)

What helped the tree to make its apples? The earth and the air, the sunshine and the rain, nothing can grow without them.

Of what use are fruits? They are good to eat and very wholesome when ripe and fresh, or when nicely cooked. Insects, worms and birds make many a delicious feast upon them, and even the larger animals enjoy them, too, sometimes.

I was crossing a field the other day with a lady, when two cows walked straight up to her. "Oh, yes," said the lady, "you want some apples, don't you?" Then she explained to me that she had once given these two cows some apples and that they had since come to her every time she crossed the field, evidently expecting to be treated to fruit.

What do you find inside the apple when you eat it? What in the pear, peach, plum, grape? (Let a child cut an apple in

halves vertically, and another child cut a second apple horizontally, and do the same with two pears.) How many seeds in the apple? In the pear? Are the seeds of any use? Look at the apple seeds. What a shiny brown color they are and how small! Yet each seed, if planted and cared for rightly, would grow to be a tree some day—a tree with roots and trunk and branches and leaves, and with spring blossoms and autumn fruits.

Are they not useful and wonderful, then, these little brown seeds? Would you like to have a baby apple tree growing in our room? What shall we do then? EMILIE POULSSON.

(In connection with the above, the poem, "Apple-Seed John," by Lydia Maria Child, is helpful from the ethical standpoint. It may be read to the children.)

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## LEND A HAND.

(This department is conducted by Mrs. E. E. Olcott.)

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*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

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## NATURE STUDY IN THE GRADES.

[Excerpts from the paper read before the State Convention of County Superintendents.]

Some one has said: "Every child has a divine right to live in the country." County superintendents are in close touch with those who are enjoying this divine right. Should they not help to bring these children who are "nearest to nature's heart" into a fuller enjoyment of their heritage?

One is tempted to believe that interest in nature study increases as opportunities for a personal acquaintance with nature decrease. For it is in city schools that pupils study nature most. They may learn, for instance, what a blessing wheat is to mankind. They are told how it was preserved for ages in the tombs of mummies. They read myth tales of the goddess, Ceres, whose name gives us the term cereal. The little folks sing:

"'Tis thus the busy farmer  
Sows his wheat in the field."

And many of them could hardly tell a grain of wheat from a grain of corn. And why should they be able to? Grains of wheat and corn have no part in their daily lives.

Prof. Wilbur Jackman told of an excursion to the country enjoyed by a Chicago school. Some of the children hugged the trees and kissed the grass in an abandonment of delight. But one little fellow intimated that he found the country *very dull* by saying, "I want to go home! Why the police wagon comes to our alley every fifteen minutes!" Pupils in the country do not hug the trees nor kiss the grass, but it is a question whether the most unpromising among them has not a truer knowledge of trees and grass than the most skillful teacher can give the unfortunate little ones who live in police haunted alleys. In Louisville, a little girl came to the principal with the request: "Will you please give me a book that tells about violets? Our teacher wishes us to write on that subject and I can't find anything about violets in the library." She studied nature in books; and almost of necessity, poor child, for wildwood violets do not grow in streets and alleys.

A teacher in a country school did not know a frog from a toad, and one of her seven-year-old pupils told her how to distinguish them. He had studied nature in field and brook.

In Indianapolis, some wee people told their teacher that *geese* say, "Quack! quack!" They were very sure because they had heard geese in the market. The mistake is not at all surprising, but most country children would resent the imputation that they did not know a goose from a duck. I mention these incidents to illustrate the point that city pupils must be taught much that those in the country absorb from their environments. Therefore, many phases of nature study should be presented differently in the two cases.

Most writers and lecturers on the subject are face to face with the problem of giving vivid pictures of nature to children who are shut in by frowning walls and dusty streets. They are not familiar with the conditions and limitations of schools in rural districts—nor with their advantages either.

My wish is to reach the hearts of district school teachers, especially those who teach for small salaries in lonely little school houses; to plan for nature study in the grades in country schools. There are many earnest, wide-awake young teachers who will soon go to higher salaries and longer terms (and further from opportunities to see nature "at home") who are getting experience in such schools. They wish to keep abreast of the times.

They would like to take part in child-study, nature-study and other studies of the new era. But they lack courage to proceed alone, and have no one near at hand with whom to consult. They doubt whether patrons would approve, and to themselves they admit that they do not quite see the practical side of such work. "Of what use is it," they question, "to be watching birds and bugs, trees and flowers, and noting which way the wind blows?"

I desire to touch upon only the simple forms of nature study, such as any teacher may safely undertake. Of course, if she has studied botany, she can make plant study more interesting and effective. The same is true of a knowledge of zoology and geology in studying animals and the earth. In many schools fine work is done with the microscope and in illustrating their observations with pencil or water colors. Such work is very instructive, and is as helpful for pupils in the country as those in the city. But very few schools are, as yet, ready for it.

One of the maxims given by Professor Putnam, author of "Putnam's Psychology," is, "Keep in view of the ideally perfect, but strive first for the practically attainable." In this paper I wish to present what is practically attainable for the untrained teacher.

What can the teacher do, the teacher without training, with little encouragement and many classes? First, she should realize that the paramount aim should be to awaken in the pupils an interest in living creatures, in trees and flowers, in the clouds above them and the very soil and stones beneath their feet; to create a desire for more knowledge about them, to quicken a love of observation and a feeling that earth and air and water are theirs if they claim their heritage. No matter how seemingly insignificant, anything that sets the pupils to thinking, to watching and learning more of the out-door world is in the right direction. With this end in view, suppose the teacher should ask the pupils to name the trees of the neighborhood, for how few know the trees they see almost every day. The list could be written on the blackboard and lengthened as the pupils learn more names. She could take the coarsest of brown wrapping paper and mount leaves from every tree in the vicinity, writing the names below. She could encourage the pupils to make similar books to take home. Wild flowers could be pressed and mounted in the

same way, the pupils gathering specimens of every flower in neighboring fields and woods. Pupils may know when and where wild flowers bloom, but the pleasure of gathering them would be doubled if they could call most of them by even local names. But how few, comparatively, try to learn the names of wild flowers. Such a composition subject as, "Tell the names of wild flowers that you know, and when, where and how long they bloom," would probably result in a few straggling lines at first. Yet, if given at the right time, it would awaken a new interest in the subject. Those whose names could not be discovered, could be characterized by a brief description, and soon pages would be filled.

By the way, because there are more wild flowers in the spring than later, many people do not realize that they linger with us till winter comes. Why not have the pupils make a list of autumn wild flowers and note which bloom the latest? Remember that blooming weeds are flowers.

(To be continued.)

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#### DESK-WORK.—HOME-MADE BUSY-WORK MATERIAL.

As I remarked in the August JOURNAL, what I said about making busy-work material is intended particularly for district school teachers, who have from one to a dozen wee people to train in habits of industry. It is comparatively easy to prepare the material suggested for ten pupils, but it is an exceedingly formidable undertaking when half a hundred little folks are to be provided for. The energetic, persevering teacher who is determined to possess a stock of primary aids, will do well to send to Mrs. E. G. Curtis, Morehead, Minnesota, for a catalogue of the "Calumet Kindergarten and Aids." Her material is inexpensive and easily duplicated by hand. Much of it is so inexpensive that many teachers may prefer to buy for a small class rather than make the aids.

#### I—DURABLE WEAVING MATS.

Weaving is a delightful occupation. The expense of the material deprives many children of the pleasure and education it affords. The durable weaving mat overcomes this difficulty by being so made that the child may weave and "unweave," thus using the same mat all the year for practice work.



A "home-made" durable mat may be made by cutting a square piece of tough card-board into narrow strips, leaving the strips attached to an uncut margin. A piece as wide as the margin should be pasted on the cut ends of the strips and the mat is complete. The "border" of the mat is formed by the uncut margin, the wide outer strips and the piece pasted on; the width should be uniform and considerably wider than the inner strips. The interlacing strips (fringes they are called) should be of the same number and width as the inner strips, and of some color that harmonizes with the mat.

Very pretty patterns for weaving may be found in the catalogue which Thos. Charles, of Chicago, sends free on application. It is a good plan to buy a set of paper mats from some kindergarten supply house and when the pupils have practiced faithfully upon the durable mats, allow each to weave one of the paper mats for exhibition and take home to keep as souvenirs.

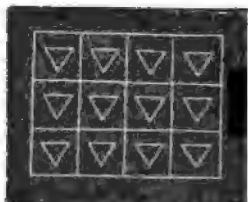
#### II—TABLETS FOR MEASUREMENT.

A good number-work device that will serve several classes is made by cutting pasteboard into *exact* inch squares. If a number of the squares be cut in two, so as to measure half inches, it will add to the effectiveness. Even the smallest tots, as soon as they can count, can, with the aid of these measures, draw on their slates lines of given lengths, and squares and oblongs of certain dimensions. It will be just as easy to show, with the tablets, an oblong five inches long and two wide, as it would be to pick out ten grains of corn. Thus they grow unconsciously into a knowledge of square measure.

More advanced pupils can easily solve such problems as: With tablets make a two-inch border round the edge of your desk and in the center of the enclosed space make a square that measures three inches on a side. What is the length of each side of the border? How many square inches in the whole border? How many in the center square?

A little girl made a quilt for her doll's bed. It was made of alternate red and white inch squares. In the center of each square she sewed a little blue triangle. The quilt was four inches long and three wide.

Draw a picture of the quilt. Tell how many each of the red and white squares. How many triangles did she sew on?

(Reduced  $\frac{1}{4}$  in size.)

There were six red and six white squares.  
She sewed on twelve triangles.

OLA B.

### III—FRACTION TABLETS.

From pasteboard cut good-sized circles, two inches in diameter is not too large. Cut these into *exact* halves, fourths, eighths, thirds, sixths, fifths and sevenths—making seven different kinds of fractions. These are used as sliced pictures are, that is the pieces are to be fitted together to make complete circles. If different colors are used, it makes the fractional parts stand out more clearly. A good plan is to have two distinct colors for circles cut in halves, three each for thirds and sixths, and four colors each for circles cut in fourths and eighths.

To enter more fully into details, suppose in each set there are two circles, a red and a white one, cut in halves; three circles, a red, a white and a blue, cut in thirds, and three of the same colors cut in sixths; four circles, a red, a white, a blue and a green one, cut in fourths, and the same colors each cut into eighths. The children see that two halves, a red and a white one, make a whole circle. Also that three thirds—red, white and blue each—make a circle. Likewise that the same is true of four, red, white, blue, and green fourths.

The majority of pupils can not, at a glance, take in more than four colors. The only point in the sixths in three, and the eighths in four colors, is to emphasize the relation between thirds and sixths, fourths and eighths. They can ascertain by completing circles that two "sixth" pieces are equal to one "third" piece, and that four "eighths" equal two "fourths."

The youngest pupils learn much from hearing the older pupils talk about the fractional parts, and almost absorb a knowledge of fractions if their desk work is wisely planned. Endless comparisons may be made and the first three grades may find much helpful desk-work in using the home-made fraction tablets.

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The early morning air, refreshing, cool, and sweet,  
The dew all on the clovers nodding at our feet,  
The warm sun of the noon-time glist'ning on the mere,  
All surely come to tell us, "September days are here."

**PROGRAM FOR PATRIOTIC DAY.**

NOVEMBER 7, 1897.

**EIGHTY-SIXTH ANNIVERSARY OF THE BATTLE OF  
TIPPECANOE.***(To be used Friday, November 5, 1897.)*

1. SONG ..... America
2. PAPER ..... Sketch of Indiana
3. RECITATION ..... Indiana

Where late the birchen wigwam stood;  
 Or Indian braves their game pursued,  
 And Indian maids were won and wooed,  
     By light of soft Diana ;  
 Fair cities as by magic rise,  
 With church towers pointing to the skies,  
 And schools that charm the world's wide eyes  
     To fair young Indiana.

Encrowned with forests grand and old,  
 Enthroned on mineral wealth untold,  
 Coining her soil to yellow gold,  
     Through labor's great arcana,  
 She fosters science, commerce, art,  
 With willing hands and generous heart,  
 And sends to many a foreign mart  
     Products of Indiana.

And where some fifty years ago,  
 The settler's wagon lumbered slow,  
 Through mud and mire and frozen snow,  
     O'er hillside and savannah,  
 The steam car, with fiery eyes,  
 Like some mad demon pants and flies,  
 Startling the echoes with its cries  
     Throughout all Indiana.

Not to old realms with palace piles,  
 And crowned kings—nor sea-girt isles,  
 Wherein perpetual summer smiles,  
     On bread-fruit, and banana,  
 Could we in word or thought compare,  
 The fine domain, the balmy air,  
 The silver streams and valleys fair,  
     Of genial Indiana.

She gives the hungry stranger bread ;  
 Her helpless poor are clothed and fed,  
 As freely as the Father spread,  
     His feast of mystic manna.  
 The sick in body, wrecked in mind,  
 The orphan child, the dumb, the blind,  
 A free and safe asylum find  
     In generous Indiana.

Her gentle mothers pure and good,  
 In stately homes or cabins rude,  
 Are types of noble womanhood ;  
     Her girls are sweet and canny ;  
 Her sons among the bravest brave  
 Call no man master, no man slave—  
 Holding the heritage God gave  
     In fee to Indiana.

But even while our hearts rejoiced,  
 In the dear home land of our choice,  
 We should, with one united voice,  
     Give thanks and sing Hosanna  
 To Him whose love and bounteous grace  
 Gave to the people of our race,  
 A free hold, an abiding place  
     In fertile Indiana.

—Sarah T. Bolton.

4. RECITATION.....Prophet's Song  
 (*Supposed song of the prophet at the time of the Battle of Tippecanoe.*)

Great Manitou, Thou Mighty One,  
     We thy children cry to thee ;  
 Arm us with thy matchless power ;  
     Lead us forth to victory ;  
 Smite our foes with death before us ;  
     Let the streams in crimson run,  
 Reddened by the blood of foeman ;  
     Let thy pity spare not one.

Hark ! ye braves, I hear the spirits,  
     Call to us from out the past ;  
 Urging us to smite each pale-face  
     With destruction's deadly blast.  
 See yon star that lights the darkness,  
     'Tis the eye of Manitou ;  
 Will ye then prove paltry cowards,  
     While that eye looks down on you ?

As the panther stalks his victim,  
     Smites it and no pity shows,  
 Spring ye thus upon the pale face,  
     Strike him down with deadly blows.

Like the snake in voiceless silence,  
 Creep ye through the tangled grass,  
 Smite him in the woody highland,  
 Or drown him in th' deep morass.

Hark ! I hear the women weeping,  
 In the white man's far-off home.  
 And his children wail in anguish,  
 For their father ne'er shall come.  
 Haste, ye braves, I hear the moaning,  
 And the death shrieks rend the air,  
 See the lightnings, hear the thunders,  
 Haste ye then the conflict share.

What, ye braves, why do ye falter ?  
 What, do ye turn back in flight ?  
 On ye chieftains, with your legions,  
 Crush them ere the morning light.  
 Doth the she-wolf leave her litter  
 At the snarling of the cur ?  
 Doth the cougar flee in terror  
 At the sound of pheasant's whir ?

Would the wild-cat leave her kittens  
 Frightened at the chirp of bird ?  
 Would the great bear prove a coward,  
 Just because the brake is stirred ?  
 Will you leave your wives and children  
 At the mercy of the whites ?  
 Will you give up home and country,  
 And surrender all your rights ?

Why flee ye then before the pale-face ?  
 Turn and smite with blast of death ;  
 Teach usurpers that the red-men  
 Guard their rights with latest breath.  
 Oh, Tecumtha, mighty chieftain,  
 Guardian of our father's graves,  
 Wert thou here, thy arm and prowess  
 Would be worth a thousand braves.

—*N. F. Jenkins.*

## 5. SONG.

### QUOTATIONS:

6. Our Country ! 'tis a glorious land !  
 With broad arms stretched from shore to shore,  
 The broad Pacific chafes her strand,  
 She hears the dark Atlantic roar ;  
 And nurtured on her ample breast,  
 How many a goodly prospect lies  
 In nature's wildest grandeur drest  
 Enamell'd with the loveliest dyes.

—*W. J. Pabodie.*

7. Land of the forest and the rock,  
Of dark blue lake and mighty river,  
Of mountains reared on high to mock  
The storm's career and lightning's shock,  
My own green land forever :  
Oh ! never may a son of thine  
Where 'er his wandering feet incline  
Forget the sky that bent above  
His childhood like a dream of love. — *Whittier.*

8. This lovely land, this glorious liberty, these benign institutions, the dear purchase of our fathers are ours ; ours to enjoy, ours to transmit. Generations past and generations to come, hold us responsible for the sacred trusts.— *Webster.*

9. The muffled dream's sad roll has beat  
The soldier's last tattoo :  
No more on life's parade shall meet  
That brave and fallen few.  
On fame's eternal camping ground,  
Their silent tents are spread,  
But glory guards with solemn round,  
The bivouac of the dead.
10. Rest on, embalmed and sainted dead,  
Dear as the blood ye gave,  
No impious footstep here shall tread  
The herbage of your grave ;  
Nor shall your glory be forgot,  
While Fame her record keeps,  
Or honor points the hollowed spot  
Where Valor proudly sleeps.  
— *Theodore O'Hara.*

11. They gave their all :—our love to them returning,  
Shall make an altar near their ashes still,  
When Sabbath sunsets on the vale are burning,  
And summer twilights fade upon the hill.

12. We give this peaceful day to hope,  
O country of our love and prayer ;  
Thy way is down no fatal slope,  
But up to freer sun and air.  
O land of lands ! to thee we give  
Our prayers, our hopes, our service free ;  
For thee thy sons shall nobly live,  
And at thy need shall die for thee.

13. OUR FLAG :

( *To be recited in concert, the pupils facing the flag.* )

The blades of heroes fence it round,  
Where'er it springs is holy ground ;

From tower and dome its glories spread ;  
It makes the land as ocean free  
And plants an Empire on the sea.

14. PAPER.....Battle of Tippecanoe and its Results

15. PAPER.....History of the Flag

16. RECITATION.....The Flag

That ocean-guarded flag of light, forever may it fly !  
It flashed on Monmouth's bloody fight, and lit McHenry's sky ;  
It bears upon its folds of flame to earth's remotest wave  
The names of men whose deeds of fame shall ere inspire the brave.

Timbers have crushed and guns have pealed, beneath the radiant glow,  
But never did the ensign yield its honor to the foe.  
Its fame shall march with martial tread down ages yet to be,  
To guard those stars that never paled in fight on land or sea.

Its stripes of red, eternal dyed with heart streams of all lands ;  
Its white, the snow-capped hills that hide in storm their upraised hands ;  
Its blue, the ocean waves that beat 'round freedom's circled shore ;  
Its stars, the print of angels feet that burn forever more. —Riley.

17. RECITATION.....The School-House Stands by the Flag

Ye who love the Republic, remember the claim  
Ye owe to her fortunes, ye owe to her name.  
To her years of prosperity, past and in store,  
A hundred behind you, a thousand before.  
'Tis the school-house that stands by the flag,  
Let the nation stand by the school ;  
'Tis the school-bell that rings for our liberty old,  
'Tis the school-boy whose ballot shall rule.

The blue arch above us is Liberty's dome,  
The green fields beneath us, Equality's home.  
But the school-room to-day is Humanity's friend,  
Let the people the flag and the school-house defend.  
'Tis the school-house that stands by the flag,  
Let the nation stand by the school ;  
'Tis the school-bell that rings for our liberty old,  
'Tis the school-boy whose ballot shall rule.

18. SONG.

19. PAPER.....William Henry Harrison

20. RECITATION.....My Country

I love my country's pine clad hills,  
Her thousand bright and gushing rills,  
Her sunshine and her storms ;

Her rough and rugged rocks that rear  
 Their hoary heads high in the air  
 In wild fantastic forms.

I love her rivers deep and wide,  
 Those mighty streams that seaward glide  
 To seek the ocean's breast ;  
 Her smiling fields, her pleasant vales,  
 Her shady dells, her flowery dales,  
 The haunts of peaceful rest.

Her forests and her valleys fair,  
 Her flowers that scent the morning air,  
 Have all their charms for me ;  
 But more I love my country's name,  
 Those words that echo deathless fame—  
 "The land of liberty."

—*Hesperian.*

## 21. QUOTATIONS.

(*Pupils should be urged to recite from memory patriotic sentiments.*)

## 22. SONG.

### NOTES.

This program is intended to be suggestive as well as helpful. The following will be found to be helpful :

"The Song Patriot," published by C. W. Bardeen, Syracuse, N. Y.  
 "Special Day Exercises," published by Robert Smith, Lansing, Mich.  
 "The School-house Flag," published by A. Flanagan, Chicago, Ill. The Coda, Nos. 123 and 214, each 2cts., and 176, 3cts., published by Ginn & Co., Chicago, Ill. Speech of Logan, Chief of the Mingoes, found in McGuffey's Fifth Reader. Love of Country, Indiana Fourth Reader. How Sleep the Brave, Indiana Fourth Reader. The Soldier's Rest, found in McGuffey's Sixth Reader. "American History Stories," by Mara L. Pratt, published by Educational Pub. Co., Chicago.

A collection should be taken to aid in erecting a monument on the the Tippecanoe Battle Ground. Teachers should urge all pupils to contribute a penny apiece, at least, and ask others who feel interested in this project to contribute freely. Teachers should set the example by heading the list with a good subscription.

EXECUTIVE COMMITTEE—J. H. Sullins, Chairman ; J. S. Glasscock, Secretary ; Worth Reed, Treasurer ; F. L. Cowger, D. M. Geeting.

Send all contributions to Worth Reed, Treasurer, LaFayette, Ind.

WE JOIN ourselves to no party that does not carry the flag and keep step to the music of the Union.—*Choate.*

THE stars on the flag are five-pointed. The coins of 1791 have all their stars with five points. At the present time all coins have six points. Look in your pockets and see and explain the historical puzzle.



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## EDITORIAL.

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### THE CURFEW LAW.

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Recently a public meeting was held in Indianapolis, the purpose of which was to organize a movement to secure the passage of a curfew ordinance in towns and cities—especially in the cities.

For the benefit of those not familiar with the term, it may be said that "curfew" (cover the fire) is an old English law and dates back to the time of William the Conqueror. To prevent cabals and plotting against the "crown," an edict was published that at the ringing of a bell at an early hour in the evening all lights must be put out—the fire must be covered—and every man must be at his own home. It will then be seen that originally the law had nothing to do with children.

Now, a "curfew law" simply means a law that requires children, under a certain age, to be at home after a designated hour (say nine o'clock) in the evening. The bell ringing at the named hour to give every body notice is called the "curfew bell."

The purpose of this law is not to take away from people any legitimate privilege, but to keep off the street those children who are not under proper parental control, and who at improper hours meet improper company and form improper habits. Running the streets at night leads to the destruction of hundreds of boys and girls every year.

The last legislature passed a compulsory education law which has for its chief purpose to take boys and girls off the streets in the day time and put them into the schools under good influences. The purpose of the curfew law is to take these same ungoverned children off the streets at night and put them to bed. These two laws working together, will save to society and good citizenship hundreds and thousands of young people who otherwise are certain to go to ruin.

The law is no longer an experiment. It is in force in several of the large western cities. The testimony is uniform in its favor. Everywhere it reduces crime and greatly reduces the number of criminals. A state law on the subject would be desirable, but it is not essential. Any city now has the power to pass an ordinance and enforce it. Teachers can do much toward pushing forward this good work.

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### THE FIRST DAY.

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The first day in a new school is the most important day of the year—this is doubly true for a young teacher. The impression made the first morning will remain for weeks and will either help or hinder all after work. It is very important that the teacher shall know the facts in regard to the organization and classification of the school. If the teacher can know the classes and the exact point to which each has advanced, so that he can at once assign lessons without asking questions, he can in a few minutes have all the old pupils at work and be able to give attention to the new pupils.

The teacher should know definitely just what to do and should have everything planned so that there will be no hesitation and no delay—and no questions on the part of the teacher. Such a knowledge and such a course of procedure will command the respect of the school at once. Such a start is worth more than can be easily estimated to any teacher going into a strange school. All this desired information can be had, if not from the trustee, from the pupils *before* the first morning. The teacher should also *know* in advance that his school-room is in first-class order for school work.

The teacher should be quiet but earnest and make things move smoothly and in order.

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### OUTLINES AND HELPS FOR TEACHERS.

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THE JOURNAL gives liberal space to "outlines," "suggestions," "notes" and "answers" in order to help teachers in their work—especially in their township institute work. In connection with the help it wishes to express a fear and give a caution. There is great danger that teachers will rely too much on these aids and not do enough work themselves.

The teachers' reading circle books are both good books—good books requiring much study. In order to get most out of either, the teacher should first read the book itself and get out of it all he is capable of getting out of it. Then, and not till then is he ready for comments by others. Then, and not till then is he capable of using to best advantage these comments. In this way alone can he derive any real benefit by the study of the book.

The purpose in answering the State Board questions is not to relieve the teacher from doing the work himself, but to afford him a standard of comparison *after* he has made his own answers.

These are pedagogical principles of universal application, and the teacher should apply them to himself as faithfully as he applies them to his pupils.

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### ARBOR DAY.

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Arbor Day is now a regular American institution. The man who conceived the idea of an arbor day lived in a treeless, western state. His conception was a local anniversary, but he has lived to see this day celebrated in almost every state in the union.

Friday, October 29, has been designated by our Governor as Arbor Day for Indiana. A proclamation to this effect has been issued by the state department, supplemented by an appeal from State Superintendent Geeting.

THE JOURNAL has advocated the celebration of Arbor Day for years. The planting of trees in and about school premises is a good thing for pupils, teachers and parents; it is a present good and a future good; it will pay in your day and your children will receive benefit therefrom.

In our October issue will be found a program for the proper celebration of Arbor Day. For additional programs see JOURNALS for March 1895; March, 1894; and almost every volume for the past ten years.

THE report by the Committee of Twelve, on rural schools is one that contains a great deal of valuable information and should be in every teacher's library. It is sold by the secretary of the N. E. A., at 25cts. Address Irwin Shepard, Winona, Minn.

THE History Class in Richmond, of which Mrs. Mattie Curl Dennis was the respected and loved leader has printed a very beautiful memorial of their friend. It is daintily bound in pure white with photogravure illustrations. It contains two pictures of Mrs. Dennis, one as a young woman, the other representing her just before death came. It pictures many scenes in nature that were dear to Mrs. Dennis. About 40 pages are devoted to her poems. These are full of sweetness and evince true poetic spirit. Should any of Mrs. Dennis's many friends wish a copy, the history class will send one. The price is 80 cts. post paid. Address Mrs. Mary Whitridge, 105 S. Eighth St., Richmond, Ind.

## QUESTIONS AND ANSWERS:

### STATE BOARD QUESTIONS USED IN JULY.

GRAMMAR.—1. Write the following words in two columns: in one column write the masculine form, and in the other the feminine: baron, duke, lad, belle, earl.

2. Which of the pronouns indicate gender by their form? Illustrate in sentences. How do you determine the gender of other pronouns?

3. Fill the following blanks with the proper forms of *whoever*; state the principle which guides you: *a.* The story was told to ..... would listen. *b.* I shall be pleased to meet ..... you may bring. *c.* The teacher wishes to see ..... threw the ball.

4. Explain the use of italicised words in the following sentence: *When we arrived, we could not easily make ourselves known.*

5. State five uses of the substantive clause and illustrate them in sentences.

6. What parts of speech have comparison, and how is it shown? Illustrate.

7. Punctuate and capitalize: *sheridan pitt and fox all drank hard and worked hard they were all great in the councils of the nation but not one of them could rule his own household london atheneum.*

READING.—1. In the light of the three inseparable phases of discourse show that, in the analysis of a production, the teacher may lead off with either the language, the imagery, or the theme. 10

2. Would this be logical and methodical? Show. 10

3. What was the "Holy Grail?" Give a brief history of it. 10

4. Give the plot of "The Vision of Sir Launfal." 10

5. What is the theme of the poem? The embodiment? 10

6. Discuss the language, or style, of poem. 10

7. Read selection to County Superintendent. 50

(Answer No. 7 and five others.)

GUIZOT'S HISTORY OF CIVILIZATION.—1. On what two elements does the political process of mankind depend?

2. Show the universality of the feudal system.

3. Show how feudalism affected civilization by affecting the distribution of population.

4. Compare the feudal society to the *patriarchate* and the *clan*.

5. Account for the hostility which feudalism excited in the minds of the agricultural classes.

6. What was the effect of feudalism on the fief holder?

7. What are the constituent elements in a federative system of government?

8. Why difficult to establish and maintain?

9. What principle, or right, in society, did feudalism emphasize? What did it neglect?

10. What powers and interests opposed feudalism? (*Any six.*)

GEOGRAPHY.—1. Why do degrees of latitude vary in length?

2. To an observer situated in 40° N. Lat., how far above the horizon is the sun at noon, June 21st? Explain.

3. Account for the fact that the range of annual temperature is much greater in the middle latitude than near the equator.

4. What was probably the nature of the process by which the great reliefs of the globe were originally produced?

5. Locate several of those dry land areas of the globe that are depressed below sea level.

6. Account for the fact that plateau areas are usually deficient in rainfall.

7. Show that there are relations of dependence between man's progress in civilization and the food supply of the zone which he inhabits.

8. Discuss the topic industries of Mexico.

9. Discuss the geography work as outlined in the State Manual.

(*Any six.*)

U. S. HISTORY.—1. Explain the effect of the colonization of America by different foreign nations upon the character of our political and social institutions.

2. What acts of England led the American colonies to declare their independence?

3. How were troops and the munitions of war provided by the Americans for the Revolution?

4. Follow George Washington during the period of the Revolution.

5. How did the United States come into possession of the Northwest Territory, and into what states has it been divided?

6. Trace briefly the history of slavery in the United States.

7. What is the Monroe doctrine, and how has it been received by the American people?

8. What were the principal features of President Jackson's administration, and their results on the people?

9. Give the general plan and purpose of the Government's naval operations during the war of the Rebellion.

10. What circumstances led to articles of impeachment against President Johnson, and with what results?

11. What has been the policy of the Government toward the Indians?  
(Answer any six.)

SCIENTIFIC TEMPERANCE.—1. Give a brief summary of the effects of the continued use of alcohol on the system as a whole.

2. What value, as a risk, do insurance companies usually place on the habitual drinker of alcoholic beverages?

3. Name the principal component parts of roasted coffee. Which of them give to coffee its popularity as a drink?

4. Is the use of alcoholic stimulants in the practice of medicine growing more or less popular? Why so?

5. In what ways and under what forms is morphine used as a medicine? When does its use become harmful?

6. Explain as you would to a class the process of distillation.

7. Does the mind of the habitual drinker become stronger and brighter or the reverse as he grows older? Venture a brief explanation for the facts as you state them.  
(Any five.)

PHYSIOLOGY.—Name the most essential parts of the eye, stating the function of each part named, and describe how "we see," using a diagram in making your statements clear.

SCIENCE OF EDUCATION.—1. What is the importance of hearing as a knowledge-giving sense?

2. State any important facts of your observation or which are generally known in regard to the hearing of infants and young children.

3. At what age do children, as a rule, show an appreciation of time and melody in music?

4. Discuss briefly the senses of taste, touch and smell in early childhood.

5. How would a knowledge of the nature of the child's sensations and sense perceptions during his early years assist the teacher of children?

6. What are some of the educational bearings of the fact that children are strongly imitative?  
(Any four.)

ARITHMETIC.—1. What mental processes are prominent in the solution of a problem in compound proportion?

$$2. \text{ Simplify } \frac{\frac{1}{2} + \frac{1}{3} + \frac{1}{4}}{\frac{1}{2\frac{1}{2}} + \frac{1}{3\frac{1}{2}} + \frac{1}{4\frac{1}{2}}}$$

3. Divide 45 hundredths by 15 ten millionths and multiply the quotient by 4 thousandths.

4. Find the interest of \$327.25 for 2 years, 3 mos. and 8 days at 5%.

5. What objections can you give to the use of elaborate objective illustrations of simple numerical processes?

6. Bought 480 bbls. of flour at \$4.50 a barrel and sold it for \$2,880.. Find the gain %.

$$7. \text{ Find the value of } \frac{2\frac{1}{2} + 4\frac{1}{2}}{1\frac{3}{4} \times 3\frac{1}{2}} + \frac{1}{8} \text{ of } 6\frac{1}{2}.$$

8. Three workmen receive \$283.50 for doing a piece of work. One worked 32 days, the second worked 53 days, the third, 41 days. What is the share of each?

9. Find the capacity in gallons of a tank 6 ft. 5 in. by 3 ft. 9 in. by 4 ft. 6 in.

10. A collector of internal revenue deposited in the treasury \$762,742.50, retaining  $2\frac{1}{2}$  per cent. of the amount collected. What amount did he collect?

### ANSWERS TO PRECEDING QUESTIONS.

GRAMMAR.—2. Personal pronouns. *He* told Mary to bring *his* pencil and *her* book; *she* told *him* that the large book was not *hers*, and that *it* ought not to be used as *its* cover was soiled. The gender of other pronouns is determined by the context.

3. (a) The story was told to whoever would listen; ["whoever" is the subject of "would listen"]. (b) I shall be pleased to meet whomever you may bring; ["whomever" is the object of "may bring"]. (c) The teacher wishes to see whoever threw the ball; ["whoever" is the subject of "threw"].

In each example, the pronoun relates to *person* understood, and in each sentence, *person* is in the objective case.

4. (a) "*When*" is used to relate to a time common to the meanings of the two predicates "arrived" and "make-known." It is called a *conjunctive adverb*, and modifies "arrived" and "make-known;" (b) "*known*" is the attributive part of the predicate "could make-known," and is used to express an attribute of "ourselves;" it is a past passive participle, used as an adjective, and modifies the object "ourselves." A word used in this way is sometimes called an objective complement; (c) "*ourselves*" is the principal part of the double object "ourselves known," governed by "make," it is in the objective case, and gets its case from "make."

5. (a) As a *subject*. "*That he is an honest man* is evident;" (b) as a *predicate nominative*,—"the fact is, *I am going*;" (c) as a *direct object*,—"I believe *that it will rain to-morrow*;" (d) as an *appositive*,—"The report *that he was killed* is untrue;" (e) as an *independent element*,—"that the orator was unable to speak being announced, the audience dispersed."

6. The adjective and the adverb have comparison; except when the comparison is irregular it is shown by using the suffixes *er* and *est*, or by using the adverbs *more* and *most*; as,—cold, colder, coldest; lazy, lazier, laziest; beautiful, more beautiful, most beautiful, etc.

7. Sheridan, Pitt, and Fox all drank hard and worked hard. They were all great in the councils of the nation, but not one of them could rule his own household.—*London Antheneum*.

READING.—(See JOURNAL for November 1896, pages 812 and 813; and see "Literary Interpretations.")

HISTORY OF CIVILIZATION.—1. The political progress of mankind depends upon the governing powers uniting theory and practice. They must know and acknowledge the influence of both. They must regard

principles as well as facts; must respect both truth and necessity. (See Guizot, pages 96 and 97).

2. Barbarism had overthrown the existing nations. Every kind of central authority or of union of provinces was broken up. The barbarians being assimilated, there was an absolute necessity for some kind of society, some kind of rule. The lack of an organized head led to the formation of groups each composed of a strong, wealthy, influential personage and his followers,—the baron and his vassals. The plan or theory was extended *below* and above the baron; its universal application was found, at the time, to be desirable and successful. Its merit all the time was that it kept society from a complete disintegration. (See pages 98, 99, etc).

3. (See page 101).

4. (See pages 104-105).

5. The cultivators of the soil, the serfs, were not considered a part of the feudal society. Between them and the lord of the domain there existed no rules or ideas with regard to rights, guarantee, or society. Hence there arose a strong hatred of the feudal system by the country people. (See pages 107-108).

6. It gave the possessor of a fief certain ideas of duty and sentiments of affection. There became developed in him principles of "fidelity, devotedness and loyalty." He was also led to resist all efforts of every authority that undertook to govern him against his wishes. (See pages 110-114).

7. It is a system "which consists in leaving in each place or province, in every separate society, all that portion of government which can abide there, and in taking from it only so much of it as is indispensable to a general society, in order to carry it to the center of this larger society, and there to embody it under the form of a central government." (See page 114).

8. It is difficult to establish and maintain, "for in order to reconcile the degree of independence, of local liberty, which is permitted to remain, with the degree of general order, of general submission, which in certain cases it supposes and exacts, evidently requires a very advanced state of civilization—requires, indeed, that the will of man, that individual liberty, should concur in the establishment and maintenance of the system much more than in any other, because it possesses less than any other the means of coercion. The federative system requires the greatest maturity of reason, of morality, of civilization in the society to which it is applied.

9. The feudal system emphasized the right of resistance, of *personal* resistance. It neglected to connect with itself a system of *legal* order and of *legal* resistance. (See p. 116).

10. It was supposed by monarchical power on one hand, and popular power on the other—that is to say, the king and the people; and it was opposed by the interests of order, law, and liberty. (See pages 119-120).

GEOGRAPHY.—1. Because the shape of the earth is that of an oblate spheroid,—that is, it is flattened at the poles.

2. The sun at June 21, is exactly over the tropic of cancer,  $23\frac{1}{2}^{\circ}$  north latitude, and to an observer there would be in the zenith at noon,  $90^{\circ}$  from

the horizon ; to an observer  $16\frac{1}{2}^{\circ}$  farther north ( $40^{\circ}$  north latitude), at noon, the sun would be  $73\frac{1}{2}^{\circ}$  above the horizon ( $90 - 16\frac{1}{2} = 73\frac{1}{2}$ ).

3. In the middle latitudes ; owing to the weak power of oblique rays from the sun, and owing to the influence of the large land masses there, the winters are much colder than they are near the equator ; and on account of the influence of these large land masses, the summers are almost as warm as they are near the equator. Hence, the range of annual temperature is much greater in the middle latitudes than near the equator.

4. From the heated interior of the earth heat is constantly passing off to the surface where it is radiated into space. This constant loss of heat causes a loss of bulk through contraction. The cold outside does not shrink ; but as the interior loses in size this crust must become forced up into wrinkles. Hence the formation of the relief forms.

5. The valley of the Dead Sea ; Death's Valley of Southern California ; a small area along the coast of Holland ; the basin in which lies the Caspian Sea ; and in northern Africa.

6. The rain is condensed by the highlands before the plateau is reached, or else the vapor laden air rising up the side of the plateau is deprived of its moisture before it passes over the plateau.

7. Where the food supply is both animal and vegetable, and is varied, wholesome, and nutritious, as it is in the temperate zone, we see the highest type of civilization ; not all a man's effort has to be spent in caring for the physical man ; some time can be given to the culture of the mind. Where the supply is chiefly fruits and vegetables, as in the torrid zone, the civilization is of a sluggish, depraved sort ; where the supply is chiefly animal and not varied, as in the frigid zone, we find a dwarfed people both physically and mentally. While these things are true, another factor is aiding in each case to make the condition what it is, and that is *temperature*.

8. See text-book.

9. See State Outline.

UNITED STATES HISTORY.—1. The effect has been to make the spirit of democracy even more democratic, and the spirit of toleration even more tolerant. Leading characteristics of the different nationalities have become general, and are important factors in our national progress, as the industry and frugality of the German and the sturdiness and determination of the Englishman. Some elements of discord and some of disorder were sown broadcast by certain of the comers, but not enough to stop the growth of sterling worth and character of the Puritans and others. Taken all together there was always enough of the saving grace of the love of order, progress, humanity, and liberty to influence the whole people, and this fact is notably exemplified by our institutions.

2. Writs of Assistance (1761). Grenville's Stamp Act (1765). Act imposing a tax on paper, glass, painters' colors, and teas (1767). New duties imposed (1768). An attempt to tax the colonies by strategy (1773). The Boston Port Bill, the Massachusetts Bill, the Transportation Circular, and the Quebec Act (1774).

3. Troops were provided by the provincial congress and by irregular



enlistments. Munitions of war were obtained; (a) by miscellaneous aid from the colonies—Delaware surrendered its military stores to the public use, and Virginia supplied a large quantity of powder; (b) by purchase as from France and Holland; (c) by capture as at Ticonderoga and Saratoga, and from vessels on the sea.

4. See History.

5. The United States came into possession of the Northwest Territory by treaty with Great Britain in 1783. It has been divided into Indiana, Ohio, Illinois, Michigan and Wisconsin.

6. Slavery was introduced into this country in August, 1619, by a Dutch vessel landing at Jamestown, and in the next 150 years spread throughout all the colonies. It gradually collected in the southern colonies only and in the formation of the constitution there were three compromises regarding slavery—one on representation, one on the slave trade, and one on the fugitive slave law. Jefferson had opposed slavery in his Proviso of 1784. The thirteen original colonies in 1789 were seven of them slave and six of them free. Anti-slavery petitions were early (1790) presented to Congress, that body voting that it had no right to interfere with slavery. The first fugitive slave law was passed in 1793, and the cotton gin was invented the same year. This machine made slavery profitable by putting the negro to raising immense areas of cotton. In 1808, the slave trade was prohibited by law, but it was continued extensively. About this time the Indiana legislature and Governor Harrison favored slavery. In the United States Senate, the political power between slavery and freedom was kept fairly balanced by alternate admissions of states, north and south. (The above is a *beginning* of a "brief history of slavery.") This may be followed by a "brief history" of the Missouri Compromise; of the career of J. Q. Adams in connection with slavery petitions; of the Texas Question; of the Wilmot Proviso; of the Compromise of 1850; of the Kansas-Nebraska Bill; of the Sumner Assault; of the Dred Scott Decision; of the John Brown Raid; of Garrison's "Liberator," Mrs. Stowe's "Uncle Tom's Cabin," and Helper's "Impending Crisis;" of the political campaigns of '56 and '60; of the Lincoln-Douglass Debate; of the beginning of the irrepressible conflict, and last but not least, of the Emancipation Proclamation, and the constitutional amendments.

7. President Monroe declared in a message to Congress, in 1823, that the United States had no intention of interfering with any war in Europe, or with any recognized European colonies in America; and that the United States would not view with indifference "an attempt by any nation of Europe to reduce an independent nation of North or South America to the condition of a colony." This very important principle is called the Monroe Doctrine, and has always since been the settled policy of the United States in foreign affairs.

8. The principal features of President Jackson's administration were: (a) His application of the principle called "rotation in office;" the result was, and has been ever since, a persistent, importunate scramble for office among the victors. This has degraded the public service, and prevented thorough reform. (b) The promptness with which he met and crushed

anything like treasonable action. The result was decidedly healthful to the security of the Union and to the spirit of patriotism. (c) His hostility to the United States Bank. The result was its overthrow, and the establishment of the sub-treasury system. (d) His "Kitchen Cabinet," a certain circle of his intimate friends who were said to have more influence with him than his official cabinet had.

9. In the Civil War in the naval operations, the general plan of the government was (a) to open the Mississippi river; (b) to blockade the ports of the confederacy, that no cotton or other produce might leave for foreign markets, and that no supplies of any kind might be carried to the Confederates; also, part of the plan was to fit out naval expeditions to capture certain ports, to build monitors for sea coast defense, and gunboats for the western rivers. Only a few vessels, such as the Kearsarge, were built for ocean service.

10. Since the adoption of the constitution it had been the practice of presidents to remove subordinates when occasion seemed to demand it. Now Congress feared that President Johnson might by removal of officers of the government who differed with him in politics, impede, if not render useless, the acts which had been passed. So the Tenure of Office Act was passed to prevent this. By this act, which the president vetoed as unconstitutional, but which was passed over his veto March 2, 1867, no officer for whose appointment the consent of the Senate was needful could be removed without the consent of that body. This sweeping measure naturally roused the ire of the president, and he resolved to ignore the act. He consequently asked Secretary Stanton (May 5) to resign; upon his refusal, he removed him. At the next session of Congress, the Senate refused to confirm this action, so Stanton again took possession of his office, but the president ordered Lorenzo Thomas, whom he had appointed in his place, to resume the duties of his office. For this action mainly, though other points were mentioned in the indictment, the House of Representatives impeached Johnson. According to the provisions of the constitution, he was tried by the Senate, Chief Justice Chase presiding. After a trial lasting from March 5 to March 16, 1868, he was acquitted, those voting guilty being one less in number than the two-thirds necessary for conviction. This has been the only instance of impeachment of a president, and many, even of those politically opposed to Johnson, thought the measure unwise.

11. The policy of the government toward the Indians has been to place them upon certain reservations and, if at all possible, to sustain peaceable relations with them. In Grant's first annual message, he announced a new Indian policy which in brief was to give the management of a few reservations of Indians to members of the Society of Friends. In a short time, other reservations were similarly entrusted to other religious denominations. In the main, this policy has succeeded in spite of injustice and frauds of Indian agents. It has given rise to the establishment of an Indian Rights Association. The government has also established Indian schools for the education of the Indian children, and among some of the tribes attempts are being made to foster the habits of economy and industry.

SCIENTIFIC TEMPERANCE.—1. The effects on the system as a whole

of the continued use of alcoholic drinks, are disordered digestion, heart trouble, congested capillaries, deranged liver, partial paralysis of the nerves, lack of power of thought, etc.

2. Insurance companies take no risks on the habitual user of alcoholic beverages.

3. Roasted coffee contains a volatile oil (*caffool*), which gives the odor and flavor; an astringent (*tamic acid*); and an active principle, *caffeine*. The volatile oil and caffeine give to coffee its popularity as a drink.

4. The use of alcoholic stimulants in the practice of medicine is growing less popular for by experimental investigation we are learning more and more about the true effects of alcohol on the human system; and these are all injurious. Patients refuse to take whisky and yet get well. It has been proved beyond all doubt that alcohol is neither a flesh-former nor a heat-producer.

5. Morphine is used as a medicine hypodermically, and internally by way of the mouth and by way of the rectum. It is used in solution, in the form of powder, and in tablets. Its use becomes harmful when, from the frequency of its use, the system has taken on a nature, or condition, that demands its use to satisfy an intense unnatural craving for it.

6. Before the process of distillation is explained to a class, the members should understand the forms of matter—solid, liquid, gaseous—and that it is possible to change matter from one form to another. His knowledge of these things should come from observation and experiment. With this basis, call attention to the fact that a gentle heat changes water to a vapor (steam) and that cold changes the steam back to a liquid (water). It must also be understood that water contains a certain amount of solid matter in solution, and that a gentle heat will not vaporize it, hence it will be *left behind* when only enough heat is applied to vaporize the water. The teacher will now have his apparatus arranged so as to apply the heat and lead the vapor to where the cold is applied. The water changes to vapor (steam) which passes over and is converted back to water. The solid residue is left behind, and the water is said to have been distilled.

7. The mind of the habitual drinker grows weaker as he grows older, for the effect of alcohol on the nervous system is more manifest than upon any other tissue. The brain, the seat of the mind, is especially affected and injured through the consequent defective nutrition and the inflammation following the congestion of the capillaries.

SCIENCE OF EDUCATION.—1. *Hearing* is an important knowledge giving sense. In learning music it is vital. We can tell much of what is going on about us through this sense alone. It aids in determining distance and direction. It is chief in the lecture system of instruction. It aids in determining the nature of certain materials. The pupil correctly interprets many things simply from the tones of voice of the teacher.

2. The hearing of infants and of young children is often defective from disease, and of many children it is defective from lack of proper cultivation. At birth and for a short time after, an infant is deaf.

3. At about the age of four or five.

4. In early childhood none of the senses are acute or cultivated; and

they are susceptible of being easily vitiated. They can all be trained, but the sense of touch develops, under skillful training, faster than the others.

5. Such knowledge would certainly guide the teacher in her training of the senses and in her development of the power of sense-perception. She would know what actions to repress and what to encourage, and how, wisely to use and cultivate the sense-perception power. She must prevent the child from having unhealthful sensations and from becoming developed unevenly.

6. The fact that they are strongly imitative should make the teacher particularly careful in regard to both words and deeds. Her pupils will quickly catch her expressions and her manner of expression, her movements and her manner of movement, her attitudes, and her kind and degrees of temper. Often, children make these things manifest when they "play school." Neatness of work, quiet movement, pleasant speech, etc., are gathered in by many children, through imitation.

PHYSIOLOGY.—1. The *sclerotica* protects the delicate part of the eye ; gives form to the eye by its firmness. Serves for the attachment of the ocular muscles.

The *cornea* receives and refracts the rays of light.

The *choroidea* absorbs the rays of light not necessary for vision.

The *iris* accomodates the eye to an average amount of light by contracting or dilating the pupil according as there is more or less light.

The *retina* receives the refracted rays of light passing through the pupil and thus catches on its surface the image (inverted) of external objects. It gives the impression of sight to the optic nerve.

The *optic nerve* transmits the impression to the brain and we are conscious of sight.

The *cornea*, *aqueous humor*, *crystalline lens*, and *vitreous humor* serve to refract the rays of light, bringing them to a focus on the retina.

The *crystalline lens* refracts the rays of light most of all the humors.

The *conjunctiva* is a protective membrane, and its secretion serves to moisten the surface of the eyeball.

The *suspensory ligament* serves to hold the lens in place.

The *ciliary muscle* serves to pull forward the choroid coat and the ciliary processes, and thus slacken the suspensory ligament ; by this action the lens is allowed to bulge forward, in virtue of its own elasticity. This change in the form of the lens is the adjustment within the eye in order to permit a clear and distinct image to be formed on the retina.

ARITHMETIC.—1. Memory, conception, judgment, and reasoning.

2. Answer,  $1\frac{1}{2}$ .

3. Answer 1,200.

4. Answer, \$37.179+.

5. The chief objections would be (a) it would take much time to prepare them ; (b) the attention of the pupils would be diverted by them from the special purpose of the lesson ; (c) "elaborate" objective illustrations would not effect the special purpose any better than illustrations from simple objects.

6. Answer,  $33\frac{1}{3}\%$ .
7. Answer, 1.
8. Answer, \$72; \$119.25; \$92.25.
9. Answer, 810 gallons.
10. Answer, 782,300.

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## TOWNSHIP INSTITUTE OUTLINES.

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### PLATO, THE TEACHER.—THE PROTAGORAS.

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Under the class called Sophists were included men differing widely in character and methods. Some were sincere and high-minded; others had no motive but personal advantage, and were utterly unscrupulous; the former devoted themselves to the honest search for and the teaching of truth as they saw it; the latter were mercenary, and corrupters of the youth.

In the *Euthydemus*, Socrates is seen in sharp contrast to the shallow, evil-minded tricksters; in the *Protagoras*, the superior force of his reasoning, which is based on a clear understanding of the real nature of truth, is shown when pitted against that of Protagoras, who is honorable, sincere, but less capable in discrimination.

The deep subtlety of the *Protagoras* makes it difficult to understand rightly. The dramatic form enables the writer to put his own opinions, now in the mouth of one, now in the mouth of another disputant. The key can be found only by grounding one's self upon the eternal principle of absolute truth as did Socrates, and by cultivating the power of clear discrimination in thought.

Hippocrates is lacking in this latter accomplishment, and his ardent desire to learn from the famous teacher prevents his pausing to consider whether the claims of Protagoras are well-founded. His earnestness, sincerity and enthusiasm should be emulated; but unless these qualities are guided by the reason, they will lead to serious mistakes.

Most people of to-day, like those of the time of Socrates, give far more careful thought to providing for the needs of the body than to the educating of the mind and soul. They trust the selection of teachers to school officers, and take it for granted that the persons selected are good exemplars for their children.

The myth, or story, always attracts the eager interest of children, as well as their elders. It shows them, as in a mirror, themselves and their fellows; the personal element involved gives reality as no abstract theorizing can do; the imagination delights in the pictures called up; and the underlying truth is more readily apprehended when embodied in a concrete form.

"Without a parable spake he not unto them." Christ chose the story as the most effective means of teaching truth to the common mind. In modern times, Rousseau, (*Emile*), Pestalozzi, (*Leonard and Gertrude*), and Froebel, (*Mother-Play*), have made use of the story in education.

The true purpose of punishment is not retaliation, but reformation, and the prevention of a repetition of the same wrong.

"Wisdom is the principal thing; therefore get wisdom." The argument of Socrates as to the essential unity of the virtues is based upon the same idea as is thus expressed in the Scriptures. Knowledge, as he uses the word, is not limited to the mere intellectual apprehension, but implies also its practical application to the art of living. Virtue, according to Socrates is the practice of the individual virtues due to the knowledge of the ultimate effects of any course of action.

In the Symposium, Plato discourses upon love, its phases and varying manifestations, ranging from the lowest, mere animal attraction, to the highest, ecstatic contemplation of the divine, or holy. It is set forth in the form of narration wherein a conversation is reported.

The method of the Symposium is dramatic in that it presents a fundamental theme with unity of effect by involving a story, together with characterization; and reflected action by means of the episode (the interruption of Alcibiades). Direct action and the dialogue form are wanting. There is no catastrophe or scenic presentation.

The wise woman, Diotima, holds that beauty is universal, unchangeable, immortal, and therefore an attribute of the All-Good. The love of true beauty leads man to desire to create beauty in some form, and this it is which makes him a partaker in the divine nature.

The incident of the interruption of Alcibiades and his band of revelers is a vivid object lesson by which the negative side of beauty, the ugly in practice, is shown. Self-indulgence is rebuked in the presence of the lovers of the truly beautiful.

The praise of Socrates by Alcibiades is a noble tribute to the nature and power of true love. He represents Socrates justly as acting under a mask; but shows that, in spite of his sometimes grotesque appearance and his harsh words, his personal power over the hearts and lives of men is irresistible. This power he attributes to the innately noble nature of Socrates, and to his passion for the true, the beautiful, and the good, and his desire to inspire others with the same love.

His speech also shows that this pure love of the highest beauty and goodness, will lead men to self-forgetfulness.

### THE LANGUAGE ARTS.

The process of imitation is so deftly and delicately woven into the fabrics of language acquirement as to make it of most vital importance for the consideration of teachers. Children have a fancy for the new. A new word appeals to them in such a way as to cause it to fasten itself strongly upon their imagination to be marshaled for duty upon occasions and in relations which provoke mirth in the thoughtless, but offer a fact of great pedagogical significance. In the matter of language, that teacher is doing the most valuable service to his pupils who is a living, active example of the power to use, with discriminating taste, strong, clear, elegant English. All that the teacher can do for the enriching of his own use of language will bear fruit in the improved language of his pupils.

Too much care cannot be bestowed upon the selection of stories or other forms of literature to be taught or suggested to children. A nice discrimination must be made between truth and fact. If the child is to be tied down to the realm of bare fact, if he is to miss the beautiful truth contained in the world's accumulation of myth and fairy story, he will fail to come into his best inheritance. But here then must be the wise guidance of the teacher whose insight should enable him to discover the genuine, the *true*,

After all, by far the greater part of the acquiring of language must come as the result of well-directed effort outside of school.

An important function of the school, then, is that of directing the reading of the pupils—the reading done outside of school. The teaching which awakens a listless child to the realization of a craving for the reading of good books at home for pleasure derived from them, is teaching literature to a far better purpose than if he were resting satisfied that his pupils were coming to know the few pieces of literature which they are being taught directly. The true measure of the work is the taste formed, the hold that the work has taken upon the character of the child. Too much analysis of the thought is to be avoided. Many beauties can be felt. It is better to allow the child to enjoy in silence what touches his heart, than to run the

risk of directing in the vain hope of discovering the method of the creator. Here is where fatal mistake is made. Over-teaching is often, if not always, destructive. It is presumption not pardonable to enter within the domain of the heart to obtrude interpretations which will come to fuller significance if reached through the child's own conscious effort to feel truth.

EMMA MONT MCRAE.

### METHOD IN GEOGRAPHY.

One great aid to the primary teacher in deciding the nature of the work that should occupy the attention of the children in preparatory geography during the first three years, is a clear understanding of the central thought of geography and the main educational inferences arising from that central thought. It is well understood that method in geography, as in other branches, is determined by the attributes of the branch of study itself, and those of the mind of the learner. Under the nature of the subject, it is found that every fact that is entitled to be termed geographical, exhibits some relation to man's institutional life.

The fact that phenomena of the earth become geographical by bearing upon those institutions known as—government, church, society, education, and business, is an important key to the method of the subject.

The phenomena of the earth viewed as related to the institutions of man may be said to constitute the subject matter of geography. If the teacher of geography has this thought in mind, it furnishes a standard by which :—

1. To test all geographical definitions.

Geography has been defined as "a description of the surface of the earth." Viewed in relation to the thought given, it is seen that this definition is defective, in that it indicates a *device* of the subject in stating that it is a *description*. It is also defective in that it sets forth as the subject matter merely the *surface* of the earth, and in that it does not indicate the *relation* in which the phenomena are to be viewed.

An attempt is sometimes made to remedy this definition by defining geography as follows: "Geography treats of the earth." The central thought of the subject at once discloses the limitations of this definition. Its improvement over the former definition is, that it omits any reference to the device by which the material is to be treated, and in that it extends the phenomena beyond that included in the mere surface of the earth; but it itself is defective, in that it includes phenomena that should not be treated in the subject of geography, and in that it does not indicate the relation in which the phenomena are to be considered. The defects herein set forth were recognized, and geography was more appropriately and closely defined by the statement:—Geography treats of earth and man in their mutual relations.

2. This organizing idea—the *phenomena of the earth in relation to man's institutions*, furnishes in the second place, a principle of selection. For example, in geography the statement may be made that Saturn has three rings, or that there are various planets beside the earth that move around the sun. With the organizing principle in mind, the teacher may determine whether these two things are to be treated as geographical phenomena. If they in any appreciable way influence man in the four institutions mentioned, they are thereby constituted facts of geography; if not, however interesting, they should find no place in the geographical work.

3. This organizing principle also furnishes a standard by which the organic order of the phase is determined. It is seen that logically mathematical geography precedes physical, and physical, political geography. This is also the organic order. All text-books recognize this order to a degree, yet in large measure depart from it. All teachers who conform strictly to the order of the book, depart to the same degree in their actual instruction. Generally, in the beginning of the text-books on geography,

the mathematical phase of the subject is very slightly touched upon. This is followed by a slight reference to certain physical phases of the subject and then the political phase of the work is entered upon and fully treated. This is then followed by certain phases of physical geography, and lastly, in the eighth year grade, or in the high school, mathematical and physical geography are again studied. The ground of this order of procedure is the supposed requirement of that institution that the geography strongly emphasizes, viz., the business world.

4. This principle furnishes in the fourth place, a standard by which to determine the unimportant and the important elements, in general. The unimportant elements are constituted by all those facts concerning the boundaries of countries, states and territories, location of capitals, form of the country, length and width in miles, number of square miles, amount of population, etc. These often constitute the greater amount of work taken in the subject, and are regarded as the essential things. It is thought that the pupil must be drilled until he can, at least, give with accuracy and facility all these facts. They are unimportant, however, for the reason that they signify but little beyond themselves. They are not determining factors in relation to the institutions in which man lives.

The important element is *surface relief*. This is seen to be the important element, in that it is one of the essential data in physical geography, and in political geography; and in that it indicates more clearly than any other element of geography, an important feature of the earth as an organism—viz., contrast.

Illustrations of the importance of surface relief will set forth more clearly its general bearing. It may be considered as determining in physical geography:—(a) the position and form of the bodies of water; (b) the rain-fall; (c) the general drainage; (d) the distribution of soil; (e) the modification of heat; (f) the location of plant life; (g) the location of animal life; (h) the location of minerals.

In political geography it determines:—(a) the occupations; (b) the location of manufactories; (c) the lines of trade; (d) the lines of immigration; (e) surface relief also has a large part to play in determining the lines of campaigns in war; (f) by determining soil and kinds of occupation, the surface relief has also a large influence in determining man's social and religious ideas; (g) the influence of surface relief may also be seen in the location of capitals and boundary lines.

HOWARD SANDISON.

(Reprinted, in part, from November, 1891 issue of the SCHOOL JOURNAL.)

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## MISCELLANY.

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THE total number in attendance at the Indiana University summer school was two hundred and fifty-two—an increase of forty over last year.

*New York Education* is the name of a new school paper started at Albany. It starts out with the intention of being an "up-to-date" paper. Price, \$1.00.

WASHINGTON, IND., laid the corner stone of a new \$40,000 school building, August 31. The contractor is under bond to have it completed by January 1, '98. This building will take the place of one that was burned during the past year.

A VERY successful summer normal was held at the Elkhart Institute, Elkhart, June 8 to July 30. Seventy-two names were enrolled. The institute is doing a good work for the teachers of northern Indiana and southern Michigan.

WASHINGTON COUNTY held a good institute this year with Dr. R. J. Aley as instructor in method and arithmetic, W. E. Henry in literature, libraries and Y. P. R. C. work, and J. E. Mack in vocal music. S. H. Hall is the new county superintendent, and he has made a good start.



THE annual catalogue of the State Normal School for its twenty-seventh year makes a good showing. It occupies more than one hundred pages and gives a concise but comprehensive view of the school. The faculty of this school now numbers thirty-nine. The catalogue may be had for the asking.

HAMILTON COUNTY has advanced the standard and now employs no new teachers who have not had at least two years of high school work; and other things being equal, preference is given to those who can teach music. What other county has so high a standard? E. A. Hutchens is superintendent.

GILMAN H. TUCKER, secretary of the American Book Co., read a paper before the N. E. A. at Milwaukee, entitled "Education from the Publisher's Standpoint." The paper was an excellent one and showed conclusively that there ought to be a close sympathy between the makers and users of text-books.

KOSCIUSKO COUNTY held its institute August 16 with F. M. Stalker, of the State Normal, and U. G. Weatherly, of Indiana University as instructors. W. T. Giffe, a musical author of note, had charge of the music. The institute was good. G. W. Worley, the county superintendent, has matters well in hand.

A BRIEF HISTORY OF THE AMERICAN PEOPLE by Edward Taylor, formerly of Vincennes, Ind., now of Bowling Green, Ky., was adopted by the state of Kansas for a period of five years. It is estimated that 25,000 copies will be called for annually. Mr. Taylor has been re-appointed superintendent of Bowling Green schools for two years.

PORTLAND MILLS is peculiarly located. The boundary line of Parke and Putnam counties runs within its corporate limits, so also the corners of Russell and Clinton townships, Putnam county, and Green and Union townships, Parke county. Because of this complicated relationship there is now a dispute over a school house which will reach the courts.

MIAMI COUNTY had for instructors at its institute Chas. A. McMurry, of Chicago University and E. B. Bryan, of Indiana University. Mrs. Adams, of Terre Haute had charge of the music. Of course the institute was a success. The annual oratorical contest of graduates for the public schools took place Wednesday evening. E. H. Andrews, the new superintendent, is doing excellent work.

UNION COUNTY had as instructors in its institute Prof. Sherman L. Davis and Dr. T. J. Bassett. W. H. Glasscock, superintendent of the Institution for the Blind, was present one day and gave an evening lecture that was highly appreciated. At the close of the week the institute was pronounced the best in the history of the county. C. W. Osborn has entered on his 16th year as superintendent and improves all the time.

JENNINGS COUNTY held its institute beginning August 9. J. M. Callahan, Ph. D., of Johns Hopkins, and Mrs. E. E. Olcott were the principal instructors. The other "foreigners" who were present a part of the time and contributed to the success of the institute were President Swain, Superintendent Geeting, President J. A. Joseph, W. A. Bell and Miss Lelia Parr. M. W. Deputy, the new county superintendent, is making a good start.

MORGAN COUNTY institute was held August 9-13 at Martinsville. W. W. Black and L. O. Dale were the instructors. This was Mr. Black's third consecutive institute in this county, and in the meantime he had been the principal worker in a county association. Mr. Dale was here for the first time and made many friends. The institute published daily a four-page, four-column paper. The new superintendent, W. O. Baker, is well liked.

DUBOIS COUNTY this year held its institute at Huntingburg. It was largely attended. The principal instructors were John W. Carr and E. F. Sutherland. State Superintendent D. M. Geeting was present and made a

very acceptable address. Prof. Jesse H. Brown, of Indianapolis, was present and gave a lecture which was pleasing and instructive. Altogether the institute was one of the best ever held in the county. Geo. R. Wilson is county superintendent.

MARTIN COUNTY held its institute at Shoals, August 2-6. W. W. Parsons and A. Kate Gilbert were the instructors and gave universal satisfaction. Superintendent Geeting's visit was much enjoyed. Editor Bell of the SCHOOL JOURNAL made an address that was well received. In this county there is a contest over the county superintendency, but the two contestants wisely joined in holding the institute. J. T. Morris is the old superintendent and Elijah McFarland is the new one.

STATE FAIR.—The visitor to the State Fair grounds at Indianapolis this year will find a complete and wonderful change in appearance. It is now a White City, every building and all the fences having been put in first-class repair and then painted white. The street railway has run its tracks into the grounds and passengers will be unloaded near the grand stand, saving a most unpleasant walk to the old station. The managers of the Fair give out the assurance that it will be well worth attending. Remember the dates—Sept. 13 to 18.

HENRY COUNTY enrolled in its institute one hundred twenty-four before noon the first day and each one paid a fee of \$1.00. The principal work of the institute was done by Mrs. Matilda Coffin Ford, of New York, and Prof. J. F. Brown, of Indiana University. W. E. M. Browne did the music work in good style. Miss Blanche Morris gave lessons in physical culture. State Superintendent Geeting was present one day and was cordially received. W. A. Bell, of the SCHOOL JOURNAL, was present one day and "lent a hand." The work was all good. W. F. Byrket is the new superintendent.

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### PERSONAL.

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CHAS. SIGNEX is principal at Servia.

W. C. BOND will answer calls at Coloma.

W. E. SCHOONOVER is in charge at Laurel.

CHAS. I. KERR holds the reins at Laketon.

C. E. BARNHART has at last reached Mecca.

J. W. SHOCKLEY will be found at Straughn.

E. J. DAVIS can be relied upon at Mooreland.

W. H. DAVIS has another year at Silver Lake.

H. L. THOMAS assumes control at Etna Green.

H. A. PAYNE is the principal man at Diamond.

C. C. MILLER will direct the schools at Sidney.

ED. NEWTON can tell you how it is at Rosedale.

I. N. WHITE is the preferred man at Lewisville.

C. C. ABERNATHY holds the fort at Dunlapsville.

HOWARD ARMINGTON is the new man at Leesburg.

D. J. CHAPIN has concluded to remain at Bellmore.

H. S. HIPPENSTEEL is the new Principal at Roann.

J. H. SPENCER knows most of the schools at Guion.

I. W. PICKARD will be in evidence again at Sylvania.

GEORGE GROSJEAN will resume work at Montezuma.

HENRY OSBORN is the "principal" man at Marshall.  
RICHARD VANDEVEER continues in charge at Milford.  
C. E. NEWTON leads the educational hosts at Coxville.  
P. B. NYE is still in charge of the Liberty high school.  
B. F. DEARDORF is directing school affairs at Kenwood.  
FOSTER MARIS will direct the young ideas at Annapolis.  
MAY PEMBERTON is the highest authority at Greensboro.  
THOMAS ROACH and Ferndale will continue to be friends.  
WM. M. HUBBARD is the man to consult at La Fountaine.  
F. N. CLEMENS is the educational director at Brownsville.  
H. F. ADUDDLE makes his debut as principal of Claypool.  
KITTIE M. SMITH is the high school principal at Warsaw.  
H. S. VOORHES is principal of the Brookville high school.  
JOHN W. LEWIS can tell all about the schools at Somerset.  
W. J. BOWDEN is authority on school matters at Metamora.  
HORACE MARSHALL will exhibit his power at New Lisbon.  
J. P. DOLAN will continue to direct the schools at Syracuse.  
J. EDWIN JAY continues in charge of the Carthage schools.  
FRANK H. COLYER is superintendent of the schools at Paoli.  
W. B. VAN GORDOR will remain at Knightstown another year.  
E. S. VICKERY will continue to hold the reins at Bloomingdale.  
GEORGIETTA BOWMAN is principal of the Rockville high school.  
HELEN B. THOMAS is high school principal at North Manchester.  
J. H. HENRY will continue to direct the school interests at Warsaw.  
H. N. COFFMAN has been retained for another year at Middletown.  
FREDRICK L. POCHIN is the new superintendent of schools at Spencer.  
NOBLE HARTER will continue to superintend the schools at Brookville.  
MRS. ROSA K. MIKELS is still in charge of the New Castle high school.  
DANIEL SCHWEGEL is the man to send sample copies to at Oldenburg.  
CHAS. MOCK, State Normal, '96, will have charge at Charlottesville this year.

WALTER IRVIN still continues to superintend the schools at North Manchester.

CHAS. EGNER will show the Princeton people what he can do the coming year.

JOHN W. SHORT is now entering on his sixteenth year as superintendent at Liberty.

HAMLET ALLEN has for many years been principal of the Washington high school.

J. L. SHAUCK will continue in charge of the Milroy schools, this being his sixth year.

W. E. MAJOR will continue in charge of the school at Moscow, the coming school year.

ORA H. BOWMAN will endeavor to sustain his former reputation as principal at Mentone.

J. F. THORNTON will remain a second year as superintendent of the Rockville schools.

C. M. RENICK will show the good people at Waterman what kind of schools he can make.

J. H. B. LOGAN, formerly of Indiana, is principal of the Breckenridge, Ky., Normal School.

JAMES F. WILLIS an Indiana University graduate is principal of the Covington high school.

MR. BERT GRUELL, of Homer, will be principal of the school at that place the ensuing year.

A. H. SHERER, formerly at Carthage, will have charge of the schools at Knox the coming year.

MILTON GANTZ, of Spencer, has been selected as principal of the Noblesville high school.

O. STALEY, who taught at Martinsville last year, will be principal at Raleigh the coming year.

GEORGE E. LONG, formerly of Clinton county, has been re-elected as superintendent at La Gro.

V. E. LEWARK will continue to superintend the Manilla school, this being his third year there.

MR. FRANK WALKER, from New Albany, will be principal of the Richland school the coming year.

THOMAS LARGE, a graduate of I. U., class '97, will teach zoology in the Evansville schools next year.

MILTON BENJAMIN, one of Posey townships successful teachers, will be the new principal at Arlington.

L. A. HUFFERD will continue to be principal of the school at Mays, this being his second year there.

W. F. AXTELL continues in charge of Washington schools. His work is reported as "most satisfactory."

W. C. BARNHART and A. F. Stewart have charge of the high school work at Rushville the ensuing year.

J. C. WEIR who has served so acceptably as superintendent at New Castle, will continue in that capacity.

JAMES SHEEDY, who has been principal at Falmouth for four years, will have charge of the school at Gings.

M. EFFIE COLEMAN, the only lady principal in Rush county, will continue in charge of the schools at New Salem.

W. D. KERLIN has everything ready to begin a second prosperous year as superintendent of the Martinsville schools.

CHAS. A. McMURRY, of Chicago University, will go back to Normal, Ill., and resume work in the State Normal school.

E. B. BRYAN, now of the State University, never fails to receive a return call when he does one week's work in an institute.

BENOIN A. MAY has been appointed principal of the DePauw preparatory school to take the place of T. J. Bassett, resigned.

GEORGE W. NEET will continue to do duty as superintendent of the Spiceland schools and principal of Spiceland Academy.

A. M. TAYLOR will again have charge of the Glenwood schools, thus making five years of successful work for him at that place.

T. W. WHITE, for ten years teacher at Adrain, Mich., will this year have charge at Rich Square Academy, (Lewisville, P. O.)

J. N. SPANGLER, formerly superintendent of the Rockville schools, will be at Onarga, Ill., the coming year. His work is in Grand Prairie Seminary.

R. L. KELLEY has been unanimously re-elected for his sixth year as principal of Plainfield Academy. He spent the summer at Chicago University.

W. P. HART has been elected for a third year as superintendent at Covington. These schools are growing, two additional teachers being required this year.

Miss Gracie A. Walker, of Reese Mill, who graduated this year at the Indiana University, has been selected as teacher of English in the Rockville high school.

E. A. SCHULTZE who has been principal of the Noblesville high school for several years has resigned to take the biological work in the Ft. Wayne high school.

ENOS H. RICHARDS has resigned the superintendency of the Spencer schools to take the department of mathematics in the high school of Battle Creek, Mich.

D. H. ELLISON has been elected for a sixth year as superintendent of the Mitchell schools. While Mr. Ellison was State Senator he simply had leave of absence.

PROF. G. L. SPILLMAN, teacher of languages in the Central Normal College, will complete his work for the Master's degree at the Indiana University this year.

PROF. LOUIS H. GALBREATH, last year holding the chair of pedagogy in the Illinois State Normal, will go to the School of Pedagogy, Buffalo, N. Y., the coming year.

JOHN W. RHODES, who has been principal at Gings for five years, succeeds E. C. Jerman at St. Paul, Decatur county. Mr. Jerman is the new county Superintendent.

O. C. SEELYE will remain in charge of the LaPorte schools. In the official directory Superintendent Seelye's initials are given "D." C., instead of O. C., which is a mistake.

WILLIAM A. FURR, of Newtown, will be principal of one of the ward schools in Elgin, Ill., next year. Mr. Furr received his Master's degree from Indiana University this year.

J. W. CARR, superintendent of the Anderson schools, with his family, spent part of his vacation at Lake Wawasee, fishing and resting. Every teacher ought to have some vacation.

WALTER DUNN, formerly superintendent of the Wheatland schools, has accepted a position in the Brookville high school. He is a graduate of I. U. and is a teacher of successful experience.

JAMES MEEK, of Fountain City, has been selected as teacher of history in the Durango, Colo., high school. Mr. Meek is a graduate of I. U. and has taught several years in the schools of this State.

S. C. HANSON, superintendent of the Williamsport schools, and author of some excellent music books, was the instructor in music at Council Bluffs this year, as he was last. He reports a large institute with seven instructors.

MISS ORA ETHEL HERSHMAN, of New Albany, will teach in the Alexandria high school next year. Miss Hershman is a graduate of the Indiana University and is a daughter of Supt. W. H. Hershman, of the New Albany schools.

PROF. CHARLES C. VANLIEW, a leader in child-study, and formerly of the State Normal School at Normal, Ill., will go the coming year to

strengthen the faculty of the California State Normal School, at Los Angeles.

ELI P. WILSON is superintendent of the schools at College Corner, Ohio. College Corner is partly in Ohio and partly in Indiana. The school building is on the State line and is under one management. The postoffice is on the Ohio side.

F. M. MERICA has been chosen superintendent of the Lagrange schools to take the place of C. H. Taylor, who resigned to accept a similar position at Muskegon, Mich. Mr. Merica is a graduate of Chicago University. There were sixty-six applicants for the place.

W. H. ELSON, for many years superintendent of Parke county, and a well-known educator of this State is still superintendent of schools at Superior, Wis. Mr. Elson recently visited his Indiana friends and did some very acceptable institute work in his old county.

ELLIS D. WALKER, of Ann Arbor, Mich., has been selected out of eighty applicants, to fill the place of Superintendent Burris at Bluffton. Mr. Walker is a graduate of Michigan University and also of the State Normal school and comes to Indiana with a good record for both scholarship and success.

W. P. BURRIS, for the past six years superintendent of the Bluffton schools, has been elected superintendent of the schools at Salem, Ohio. Salem is a city of 10,000 population and has fine school buildings, the high school building alone costing \$55,000. Mr. Burris is a progressive man and Indiana regrets to lose him.

ARNOLD TOMPKINS, whom Indiana still claims, was recently offered the presidency of the Southern Illinois Normal School, located at Carbondale, at a salary of \$3,500. After carefully weighing the matter, he declined the flattering offer and so will continue to fill the chair of pedagogy in the State University of Illinois, at Champaign.

E. B. ANDREWS, for many years president of Brown University, and one of the ablest college presidents in the United States, has resigned his position under peculiar circumstances. President Andrews is a very radical "free silver" man and during the past year made many public addresses on this subject. The Board of Trustees were unanimously opposed to "free-silver" and asked the president to keep his views on *this subject* to himself,—as he was injuring the financial prosperity of the University. The president said he could not give up his liberty of speech, and so tendered his resignation.

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Descriptive pamphlet free. Rumford Chemical Works, Providence, R. I. Beware of Substitutes and Imitations. 6-11.

W. E. TOWER, who has been at the head of the Elkhart Institute the past two years, goes to Englewood high school in September. His successor is Mr. Henry C. Heasley, of Ohio, graduate of the classical course of Wooster University. He has had two years experience as teacher, and will undoubtedly do good work at the Institute.

J. F. HAINES, superintendent of the Noblesville schools, and six of his teachers spent a part of the summer vacation at Chautauqua doing pedagogical work. Noblesville *requires* teachers to occasionally go to summer schools, or else ask for leave of absence. Mr. Haines has been connected with the Noblesville schools for the past eleven years—nine years as superintendent.

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### BOOK TABLE.

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THE AMERICAN SWINEHERD, published in Chicago, is a paper that every farmer should read. Stock raising as well as school teaching is being reduced to a science.

OUR DUMB ANIMALS should be read by all boys and girls. If a teacher can have a copy to pass around in his school-room, it will do much good. Price to teachers, 25 cts. a year. Direct to Geo. T. Angell, Boston.

THE NATIONAL NORMALITE is a new paper started at the National Normal at Lebanon, O. It is conducted in the interest of the school but most of its matter is of general interest. It is an exponent of independent normalism.

MEMORY GEMS by Dr. Geo. W. Hoss, of Wichita, Kan. This little book contains about seventy-five pages and is filled with well selected and original classified "gems." The value of such selections, in connection with school work, no one will dispute. Every teacher should have such a book.

WOMAN'S HOME COMPANION, published by Mast, Crowell & Kirkpatrick, Springfield, O., is a three-column, twenty-four-page monthly magazine, that is exactly what its name indicates. It contains all the departments usually found in papers intended specially for women and they are well edited. Price, only 50 cts. a year.

MESSRS. HOUGHTON, MIFFLIN & Co. have recently published in their famous Riverside Series [Nos. 107 and 108] "Grimm's German Household Tales." In two parts, each, paper, 15c.; the two parts also in one volume, linen, 40 cts. [No. 109] Bunyan's "Pilgrim's Progress." Edited with an introduction and notes by William Vaughn Moody, (double number.) Paper, 30 cts.; linen, 40 cts. [No. 105] Carlyle's "Essay on Burns." Edited by George R. Noyes. Paper, 15 cts.; linen, 25 cts. [No. 106] Shakespeare's "Macbeth." Edited by Helen Gray Cone. Paper, 15 cts.; linen, 25 cts.

THE STORY OF THE CHOSEN PEOPLE.—By H. A. Guerber, author of "Myths of Greece and Rome," etc. Cloth, 12mo, 240 pages, illustrated. Price, 60 cents. American Book Company, New York, Cincinnati and Chicago. In this little volume the story of the Chosen People, or Hebrews is told in the same objective manner as the story of the Greeks and of the Romans by the same author. The great characters and events of history are described in the form of interesting stories. Beginning with the creation, it gives in a connected series of stories an outline of the most important events in the history of the Chosen People. While these stories are derived

from the Old Testament, they are told from a purely secular standpoint, simply as historical stories, without any reference to their doctrinal or religious significance.

**AN EXPERIMENT IN EDUCATION**, by Mary R. Alling-Aber. Harper & Bros., New York. This book is an account of an experiment in education that was tried more than fifteen years ago, along the lines of what we are pleased now to call the "New Education." Had this book appeared fifteen years ago it would have been greeted with wonder and astonishment. But it lacks the charm of novelty it would have had then, since to-day there are hundreds of teachers doing practically the same work that Miss Alling demonstrated was possible. In 1881, Miss Alling established a private primary school in Boston, to test her theory. "The aim of the experiment was to see whether the child may not be introduced at once to the foundations of all learning—the natural and physical sciences, mathematics, literature, including language and history—and at the same time be given a mastery of such elements of reading writing and number as usually constitute primary education." The experiment was considered a success and in the first chapter in this book Miss Alling gives the reader a view of her methods. Later a Miss McChesney, of Englewood, Ill., worked along the same lines to the satisfaction of Orville T. Bright, superintendent of Cook county. A large part of the book is taken up with the principles underlying the experiment, thus making it a valuable addition to psychological literature.

**PRACTICE SYSTEM OF BUSINESS TRAINING AND BOOK-KEEPING**, by Charles R. Wells, director of the school of business of the Chautauqua University and author of the Wells system of penmanship—Williams & Rogers, 134 South St. Paul Street, Rochester, N. Y. This book outlines a very attractive and quite unique method of introducing pupils to the mysteries of keeping books—following Comeneus's rule, the pupil learns to do by doing. The aim of the book is to give as much knowledge of business methods and book-keeping principles as possible while doing the required work. All work is performed in a class and under the eye of the teacher, all pupils performing the same work at the same time. The pupil has constantly before him the best examples of modern business penmanship which he is expected to carefully imitate. A Teacher's Guide accompanies "The Practice System" giving complete instructions to the teacher regarding the management of the work—the outfit costs \$1.00. Sample pages will be sent to any teacher for examination, with a view to introduction, or a sample outfit consisting of the text book, original entry ledger, combination blank book, voucher files and Teacher's Guide will be mailed for 50 cents.

**LANGUAGE LESSONS.**—By Charles DeGarmo, of Swarthmore College. Published by the WERNER Co., New York and Chicago. These language lessons are in *two* books, thus making a series. There are two leading ideas in the development of the subject-matter. They are (1) progressive exercises in composition, and (2) an inductive approach to grammar. The work is consequently divided into two classes of lessons—sentence exercises and composition exercises. Both exercises are based upon the occupations of men, the facts of nature and of history, and upon a few masterpieces of literature. The consequence is that the range of knowledge is increased and the language experience provided at the same time. These books present the subject of language from the inductive standpoint. Their motto is, "To the science through the art." Beginning with the simplest and most fundamental distinctions in language, the grammatical ideas are presented one by one in natural sequence not by rule, definition, and illustration as in analytical grammar but by concrete exercises in which the pupils learn by much doing. When a series of ideas has been sufficiently embodied in sentence exercises, a summary of the points developed is placed at the close of the chapter, thus enabling the teacher to have a perfect knowledge of the end toward which the lessons are progressing. Book I is designed for the



use of the pupil during the third and fourth years of the graded school ; Book II for the two succeeding school years.

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### BUSINESS NOTICES.

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## IMITATIONS OF CHILDREN.

CLARK WISSLER, PROF. OF EXPERIMENTAL PSYCHOLOGY, OHIO  
STATE UNIVERSITY

A parent once said to me: "My daughter is the most peculiar girl that you ever saw. She adores her teacher so completely that she walks, talks, acts, dresses, and even smiles like that teacher. It is especially fortunate that the teacher in this case is a lady in every respect, and if my daughter continues to show such a weakness, I will be under the necessity of keeping her away from teachers who are not in all respects refined and cultured."

Now, this well-meaning parent was mistaken; his daughter was not the most peculiar girl in the world, but one of the most natural. True, she may have gone to extremes, but her doing so was an unconscious outcome of the intense feeling that held her attention upon the ideal in the personality of the teacher. Upon the other point, he was not mistaken; his daughter is sure to become as those who seem to her superior in things which she feels necessary to her well being and if her teachers happen to possess such excellencies, their personalities will be stamped upon hers, be they good or bad. And furthermore, this same father who was a successful merchant, had done the self-same thing throughout his whole life; he copied after the best of his own profession or at least after those whom he regarded as the best and who represented the kind of a merchant that he wished to become. Thus the father saw in his daughter a reflection of his

own fundamental life but was unconscious of himself as a reflection of a great fundamental principle of human progress. Imitation is so deeply knit about the lines of our growth that we are long ignorant of its existence, and it is only by means of the most painful analysis that we are enabled to say what is imitation and what is not. A gentleman once pledged his companions that, if he were given a cane and a head of cabbage, he could blockade the street in fifteen minutes. Tossing the harmless vegetable into the gutter and rolling it about until the sewerage had made up a unique disguise, he took a stand at a safe distance, fixed his gaze upon the mysterious object, and extended the cane as a danger signal. In a moment a newsboy dashed up, stopped, and began pointing; others came and, in less than no time, the street was blocked. The police came to remove the "infernal machine" as they supposed it.

If this incident has any bearing upon the question in hand, it shows, at least, that imitation is spontaneous. And if its spontaneity is thus betrayed in the adult, shall we not expect to find it unchecked in early childhood? A study of observations, recorded by the various contributors to the Massachusetts State Normal collection, which appeared in a late number of the *Pedagogical Seminary* over the name of Miss Ellen M. Haskell, indicates that with most young children self-consciousness has not yet assumed control or begun the extirpation of all that is spontaneous and free. But the shadows of the tyranny that is to come fall upon the child very soon, indeed, and little by little, the conventional straight-jacket stiffens up his personality. The energy of the child must pass over from potentiality into actuality and the causeway, which follows the line of least resistance and which possesses the greatest attraction, is known to us as imitation. "Man is educable because he is imitative." As he approaches maturity, the resistance increases, but the function of imitation holds to the end.

Imitative acts may be divided into two classes: involuntary and voluntary, or reflex and self-determined. Under the category of the reflex would fall all imitations marked by an absence of the mental element, except in so far as mental action is involved in the immediate passage from the perception of a motion to the performance of it; under the second, all imitations whose primary causes are motives, implying desires, and necessitating choices on the part of the individual.

Reflex imitation is illustrated best from the acts of children less than four years of age. Here are two typical examples :

"A little girl stood watching a conductor, she waved her arms as he did, and ceased when he ceased."

"A little boy was walking with his teacher. It was raining and they carried umbrellas. It stopped raining and the teacher told him he had better shut his umbrella. He said, 'I don't want to.' After a few moments, she closed her umbrella and he did the same without saying a word."

We could not justify a statement that held such acts to represent a stage in the child's development, or that placed the child in one stage to-day and another to-morrow, but we do feel justified in the statement that more of the acts of early childhood are reflex imitations than at any other period. Adults are far from being free from such and, though they often check the impulse, yet they have a distinct consciousness of its presence.

But before entering into a discussion of this phase of the subject, let us consider for a moment the nature of voluntary or self-determined imitations. We said that to this class belong all of those imitations whose primary causes are motives and that motives imply desires. Children do not imitate all acts coming under their observation; only certain acts impress them, and these vary in kind with individuals as well as with age; they take a pleasurable interest in certain things and this interest is the key to their personalities. This interest also determines what acts they will imitate. Thus they may regard certain movements of adults as expressive of some inner state; as an illustration, a friend writes: "I recollect how I used to see my father's forehead wrinkled and his eyebrows drawn down when at study, which lead me to believe that such movements were essential to hard study and, when I poured over my Primer at school, I made 'wry' faces and sought to assure myself of being 'hard at it' by running my fingers over my forehead to ascertain whether there were wrinkles there or not."

Children imitate motions which seem to be useful; as an illustration: "Payson is two years old. He often goes to a stone quarry, where he sees stones moved by a derrick. After hammering a block of wood for a time, he made a feint of lifting it and said:

" 'Want to lift it up.' "

“ ‘Well, lift it up,’ said his mother.

“ ‘Want to lift it up like a stone.’

“ ‘Well, lift it up like a stone.’

“ ‘Want a derrick,’ said Payson.”

Curiosity to see how a thing is done may lead children to acts of imitation. We usually consider such acts as growing out of a desire to do things as adults, but many careful observers insist that even this is at bottom nothing save curiosity. An illustration: “Mary (one year and eleven months old) opened her baby brother’s mouth and rubbed her finger along his gums as she had seen her mother do.” “At a festival, when the food was passed around by a waiter, several persons in the group where S. sat refused cheese by shaking the head. It was not offered to S., and he called out to the waiter, ‘Pass it to me so I can shake my head!’”

A large percentage of the imitations among older children and youth—that long period in which the romantic appeals to them with special force—are attempted reproductions of acts or conditions of being that have in themselves an aesthetic interest. Since the literature of the young is full of the aesthetic, since it is the essence of the great bulk of teachers’ stories, and since it is that element which adds charm to narratives of adults in which the young so often take a wonderfully deep interest, we may expect this phase of our subject to have a special bearing upon the education of the beings who are to become the men and women of the future. The ignorance of the aesthetic feelings among those who have the care of children leads them to misconstrue the intents of their little charges, thus inflicting upon them much unnecessary persecution and decreasing the small amount of this world’s happiness. The burden of the blame falls not upon the teachers, but upon the parents. Observation has led us to believe that many parents deal less intelligently and less humanely with their children than teachers, causing thereby great unhappiness and often leading to absolute viciousness that can not be eradicated by the best teachers of the world. But before going too far, permit me to illustrate the effect of the aesthetic interest by some authentic observations.

A lady writes: “When about eight years old, I saw a picture of a girl lying down with her hands raised until they came at about a level with her shoulders. I thought this an exceedingly

graceful attitude, and afterwards when I was running, I would raise my hands."

Another recalling an incident of her seventh year says, "I was climbing up 'the ledge' with my sister when I caught hold of a grape vine which hung over a dangerous mass of rocks and swung on it. Any one seeing me must have inferred that I was trying to 'show off,' but in reality, I was playing that I was a fairy or Indian girl like Nokomis, whose story had been told me."

These incidents in themselves insignificant are yet full of suggestions sufficient for a paper in itself, but we must leave them for the present at least.

To sum up briefly, imitative acts are either reflex or self-determined. The primary cause of the latter may be interest—interest in expression, in usefulness, in the manner of doing, in beauty. Back of it all is a desire to be and a choice of doing.

It is obvious that imitative actions are often of complex origin, i. e., several of the causes cited above may combine in leading to such acts. Impersonation is a common form of this activity."

"Every adult can doubtless recall the exquisite pleasure he experienced in youth in impersonation. For most of us the pleasure is gone, because in part, perhaps, we are too keenly aware of the incompleteness and awkwardness of our acting, in part because the constant necessity of self-control has produced a sense of shame at yielding to any free expression of feeling. We may thrill with emotion as we read Shakespeare, but nothing would tempt us to assume the postures, make the gestures that we see with the mind's eye, or speak in tones that we hear better in solitude than in the theatre. The adult imagination needs, for most of us, to be stimulated by scenery, by costume, by circumstance, but two-year-old Willie puts on his father's belt, collar and cuffs, and taking a stick of wood in his hand, says, 'See, mamma, I p'liceman; I's Mr. Matthews!' Mabel of the same age, dressed herself in a vest, cap, large slippers and spectacles, and on being asked who she is, makes the same reply. She happens to see herself in a looking-glass and dances and cries for joy. She needs no audience for her drama and lets nobody into her secret until she is asked. It is enough for her that she is that extraordinary and exceptional person that occasionally passes the house. She is not 'making believe' in the sense

these words have for older persons ; she is rather 'in the state of a hypnotized person, to whom the suggestion of being some one else has been made.' Her sensations are simple and unalloyed as those of mature people can rarely, if ever, be. D. took a slate under his arm and walked back and forth from one room to another crying 'Sunday Telegram.' The record makes no mention of asking members of the family to buy papers. Perhaps he had never seen a paper sold ; at any rate that was no part of what he had perceived, and was unnecessary to his idea of a paper boy." But the child's world is constantly widening and his ideas of things growing in intensity ; his idea of a policeman, which at first embraced only the prominent parts of his paraphernalia, gradually absorbs the details. His idea of consistency develops, demanding completeness of detail in imitation. The consciousness of this weakness in his impersonations produces embarrassment when subject to the scrutiny of others. Here begins the discipline of repression, the prison house begins already to close upon the growing boy and spontaneous activity meets an ever increasing resistance. But the growing sense of completeness is in itself evidence of a growth of intellect, an evidence of ability to analyze things and form better ideas of their content.

"A group of three girls, the eldest nine, imitate the preaching of a minister by repeating in turn a form of words not very unlike what they have heard at church, but they add that curious element of make-believe, the charm of which is perennial and all-pervading. They arrange their blocks like settees and place spools on them to represent the congregation. For consistency's sake they arrange a pulpit and place a spool in it for a preacher, and then, disturbed by no incongruity, themselves do the preaching. How far they fancied the voice to proceed from the spool-preacher, and how little his existence interfered with their own impersonation of the preacher, is not clear, but a highly interesting state of the child mind is disclosed. While it requires a fitness of things up to a certain point, it contents itself with glaring omission or mal-adjusted arrangements. The completeness which the adult mind demands it is wholly indifferent to, yet the parent is often surprised at the scorn with which a make-shift is rejected which he thinks far better than that which the child adopts."

This brings us face to face with the fact that the child's vocab-



ulary and images differ widely from our own in content. This we are prone to ignore upon the assumption that in the language of the child *money* is identical in content with our own *money*, or that the child's idea of a news boy is a proto-type of our idea of the same. We have just seen the fallacy of such assumption in the case of D., to whom a newsboy was one who rushed along with a packet under his arm and "yelled like an Indian." His experience was limited, his world had as yet narrow bounds; when he once comes to know that newspapers are essential and that they are to be sold and money received in exchange, then these details will be embodied in the impersonation. The first ideas of a child are little more than groups of the prominent and striking characteristics, all of the accessories are ignored. He extends his world by a series of leaps from one peak to another, exploring the valleys at his leisure.

"This has a bearing upon the so-called logical processes in teaching. A logical process forced upon a creature that acts by impulses and leaps, that crosses rivers without bridges and gulfs without boats, yet is blind to plain paths, is the Chinese bandage on the foot. It means present pain and everlasting disability."

Avoid the teacher who has a prescription case of devices of all sizes and shapes which he or she claps down over the child like so many bell-jars.

Instinct is the great prompter of child activity. The extension of his experience is imperative. There is great necessity of freedom to the promptings of instinct in children. In the words of Mr. Ruskin, "set the child on the bare-backed horse of its own will and let it break it by its own strength." Yet discipline has its place, and the bit, over-check and hold-back must be put on, but there is danger of keeping the harness *on* too long. Parents are the first oppressors. The fear of the child's getting hurt, his tendencies to do things destructive in result cause parents to deprive him of much necessary freedom. "A child who has seen a house-painter at work sees no harm in dipping a clothes brush in water and rubbing it on a papered wall; nor when he has seen bread placed in the oven, in putting his shoe in the same place. Still freedom is my plea. Not half so many bodily dangers beset the child as we fear, not half so many of his imitations are mischievous as we think; while the courage to attempt new things, the discrimination between what can be

done and what can not, are qualities so valuable that much may be risked in their behalf. The child is ignorant of the results of his acts, he performs them without any reference to objective consequences. He is seeking simply enjoyment of sensations and acting without the checks which knowledge, reflection and altruism make operative with the adult. He is developing a personal power, growing as an individual and gaining solidity and stability. He must live for himself until he gains a power of resistance and intelligent choice."

"For the child in school a still stronger plea is needed, for here custom and tradition have piled up obstacles to freedom to an almost insurmountable height. The teacher who will take advantage of the instinct of imitation, as an artisan takes advantage of the fluidity of water, or the hardness of iron to effect his purpose, must create an atmosphere of freedom, in which the instinct can have free play. Repression, prohibition and compulsion must have the smallest place, and encouragement, permission and liberty to choose must prevail."

At this point we can not fail to be impressed with the necessity of knowing the child. We have buried ourselves in science, and meanwhile many a "Topsy" has come into the world and "just growed." Child-study means that we want to know a sufficiency to get at the child's inner life so that we can look out upon the world through his eyes and thus live with him more intelligently and treat him more fairly. In the first part of this paper we noted the liability of the misunderstanding of motives by adults. A lady writes of an incident of her childhood which has always been to her a bitter recollection and a source of unwilling reproach. When seven years old she became absorbed in fairy stories and had an intense desire to be a fairy. She arrayed herself in a scanty costume and played fairy under the apple trees. Her father chanced upon her and dealt with her harshly. The injustice of the punishment and the destruction of that intense happiness is to this day an absolute torture to that lady. Her father mistook the motive and a blunder was the result. A bad motive was attributed to this child simply because in an adult a bad motive would underlie a similar act, when in truth this child was utterly incapable, intelligently, of the conception involved. A grave injustice always leaves its mark. The memory of injustice is a moral cancer that eats its way down through every fiber of our being.

The study of Children's Rights, by Miss Schallenberger, in the October, 1895, number of the Pedagogical Seminary, is an attempt in the direction of the child's idea of right and his conception of what is due him as an individual, by the knowledge of which we may avoid this moral man-slaughter.

She sent out to schools here and there the following story : Jennie had a beautiful new box of paints ; and in the afternoon while her mother was gone, she painted all the chairs in the parlor, so as to make them look nice for her mother. When her mother came home, Jennie ran to meet her, and said, " Oh, mamma, come and see how pretty I have made the parlor ! " But her mother took the paints away and sent her to bed. If you had been her mother, what would you have done or said to Jenny ?

3,000 papers, from children of all ages between 6 and 16, were secured and classified under the direction of Earl Barnes, Professor of Education, Leland Stanford, Jr., University. The teachers were careful in submitting this question not to produce any unusual embarrassment, and the results are, in the main, expressions of the real child.

The limits of this paper permit mention of but three lines of study suggested by the children's papers :

1. The reasons for punishment.
2. Regard for the motive beneath the act.
3. Difference between boys and girls.

I.

There are three clearly defined reasons for punishment shown in the papers.

The first is clearly for the sake of revenge. Jennie made her mother unhappy ; she must be made unhappy. She made her mother angry ; she must be made angry.

One child's answer, selected as a type shows the feeling of revenge in the piling up of punishment. Quoting its own words : " If I had been Jennie's mother, I would of painted Jennie's face, hands and toes. I would have switched her well. I would of washed her month out with soap and water, and should stand her on the floor for half an hour. " A young child of ten beats a chair over which he has fallen. We say he shows his temper. He is probably in this first stage of development. He doubtless feels that he has a right to get even in some way.

It was found that whipping seemed to satisfy best this feeling of revenge. The statistics show that out of 1000 each of boys and girls of six years of age, 1,102 would whip Jennie; out of the same number at 16, only 185 would whip her. This indicates that young children look upon punishments as means to revenge and that they abide by the old Mosaic law "an eye for an eye," etc.

The second reason for punishing Jennie is to prevent a repetition of the act. Threats, scoldings and forced promises are some of the means suggested by these youthful mothers. "And make her never do it again," is a common sentiment. The children of their class look only to the result and the aim is to prevent wrong doing. Such punishments rest on fear and terror, two emotions that are disappearing as disciplinary forces among civilized people. Yet most public law is based upon this principle.

"The third form of punishment is a degree higher still. Jennie is punished in order to reform her. In the previous examples the act was all important. Now Jennie is all important. Her moral condition is the subject to be considered, and the act itself is merely illustrative."

As has been said the older children whip Jennie very little. They explain to her the wrong she has done. Their reason for punishment is that the wrong-doer may be corrected, reformed. Of 2,000 boys and girls of six years none would explain to Jennie why it was wrong to paint the parlor chairs. Of the same number at twelve years, 181 would explain to her, while at sixteen the number rises to 751. A girl says that "it would have been better to have talked kindly to Jennie and showed her the wrong in doing this without asking her mother, and that if this mother had thought and put herself in Jennie's place before she put Jennie to bed, she would not have done so."

This form of punishment, if punishment it can be called, is attracting the attention of all thoughtful people to-day. This conception is based upon love; it is long in developing in a people, it is the last to develop in childhood. We see here quite a similarity between race-development and child-development.

## II.

Let us turn a moment to the attitudes assumed by the children toward the motives that lie back of an act. "The intellect-

ual and moral condition of a man can be fairly estimated by his ability and willingness to judge of the motive which actuate those about him. A marked difference in children regarding motives is noticeable."

"The young child thinks of the result of the action. If the result is bad, punishment should follow; if not, the offender should be allowed to go free."

"The older children on the contrary, think of the motive that led to the action. If this be good, punishment should be light or not at all. At six years old, twenty-three children out of 2,000 speak of Jennie's ignorance and evident desire to do right; at twelve years, 322; at fifteen, 654."

We saw in the beginning that when the child whitewashed the wall he considered only the subjective or pleasurable result. From the above we see that experience has taught the "seven year old" to consider the objective results, but the youth turns his consideration back into the innerself upon the subjective cause. Here is an interesting line of growth.

### III.

Differences between boys and girls were noticeable. Boys appeared more cruel in punishment. More of the girls would excuse Jennie as ignorant or explain to her. Very few of either would threaten or exact promises of Jennie, which indicates that such have little weight with them. Of those who advised "cleaning chairs" and "lose paints" there was great uniformity in age as well as sex.

Notwithstanding the fact that many objections could be raised against the value of these 3,000 papers as a study of the ideas of right in the child-world, its general significance cannot well be denied. After a careful study of these papers Miss Schallenger draws the following conclusions:

1. Young children are less merciful than older ones. They believe in the right of revenge.
2. Boys are less merciful than girls.
3. Young children judge of actions by their results, older ones look at the motives which prompt them.
4. Restitution is common to all ages.
5. Girls consider the *why* more than boys; they explain oftener.

6. Threats and forced promises do not impress children.

Now, we have seen that the activities of children are chiefly imitative, we have glanced at the chief cause of such activities, we have seen a wide difference between the child's world and our world, we have examined in detail a specific act of imitation and sought out the child's interpretation of the same. We have seen freedom to be a condition of growth. Better let the boy mark up the wall than dwarf his development; the wall can be restored but whitewash will not restore the boy. We have found that very young children regard certain rights as inalienable, and that a disregard of these rights may lead to resentment and a tenacious sense of humiliation.

The child has a place in society, we must get along with him in some manner. Through ignorance and neglect we often fail to render him his just dues; we often make his whole life conform to our selfish convenience, no matter what his desires may be, no matter what may be his tendencies, no matter though he is compelled to make such sacrifices as we would resist to the last breath, yet we follow out our own views and he must adjust himself as best he can. We do not wish to be considered radical or extreme in this matter but the subject seems of too great importance to be passed in a casual manner and in conclusion we beg leave to present four propositions to stand until disproven. These propositions apply to every one who comes in contact with children, be they parents, teachers, brothers, sisters, relatives, or strangers. They are:

1. We frequently mistake the motives of children.
  2. We disregard the influence of imitation.
  3. We fail to understand the public idea of right.
  4. We are apt to crush out spontaneous action.
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BEGIN the study of botany in the autumn. Study first the fully developed plant and all its parts, the root, the stem, the leaf, the flower, the fruit. Next spring the children will watch with greater interest the development of the parts which they have already studied in their mature state, and the teacher will not fall into the error of thinking all of botany lies in flowers.

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## PRACTICAL LINES OF CHILD-STUDY FOR THE AVERAGE TEACHER.

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[Abstract of address by G. W. A. LUCKEY, University of Nebraska. Child-Study Department N. E. A., July 8, 1897.]

The nature of this paper and the discussion which is to follow must depend largely upon the meaning ascribed to the terms, "Practical" and "Average Teacher." Different as may be our definitions of the word "practical" I believe that in general we will agree that everything which aids in making the individual a stronger and better teacher without in any way injuring self or others, is practical. The term "average teacher" is more difficult to dispose of. After a vain search I was unable to find anyone who was willing to admit that he was simply an average teacher. No matter where I sought, the average teacher was always thought to be found a little farther down the scale.

With your permission, however, I shall use this term to include that large body of teachers generally known as the rank and file.

The child-study movement is in its infancy. It has spread with surprising rapidity and has been received with unexpected enthusiasm, but its meaning is only partially understood. "It is nothing less than a direct, inductive, quantitative study of the natural history of human beings." The main purpose of child-study is to know man better. The extent and importance of this movement becomes the more apparent when we appreciate the fact that the one subject from which all others radiate, and into which all will finally concentrate is the study of humanity.

The spirit of this movement is the same scientific spirit which is causing such radical changes in the teaching of history, literature, science, etc., and is attributable to the scientific age in which we are living.

After giving a description of the principal methods used in child-study the speaker said: A study of the personal reminiscences of a class of adults brings us into closer sympathy with child life and furnishes us with the most important means of correctly interpreting the feelings and actions of others. Live over again in reminiscences your early experiences if you would become a great teacher of the young.

The method used in child-study is of far less importance than

the interest, sympathy, intelligence and persistence which the teacher brings to the work.

Admitting that child-study is encompassed with many difficulties it is nevertheless within the ready reach of every teacher and promises greater returns for the effort than any other subject. Under suitable conditions any phase of child-study will be found practical, and especially so if it increases our knowledge and appreciation of children. Whatever stimulates the teacher to originality of thought, and enables her to become a real student, is practical. Everything which discourages true growth, and originality in the teacher is wrong, whether it be school board, superintendent or periodical. Mere dogmatism is not originality, but the reverse. If you have discovered a new fact you will always be able to make it clear to others by sufficient proof. In our summer schools and university classes teachers become very impatient when placed in the libraries or laboratories to do a piece of intensive work. They seem to feel that this is a waste of time and wish rather to do extensive work in order to get a general idea of all the subjects. Every one knows how such work destroys the student spirit and undermines the real power of the teacher.

The child-study movement seems to offer an opportunity of overcoming both of these difficulties, unless we make the grave mistake, which now seems probable, of studying children through books. With children all about us—in our very homes and companionship—if we must go to second-hand sources to become acquainted with them I pity the profession. Monitors we are, and monitors we remain. It is true that the teacher is interested in child-study from the standpoint of its direct application to the problems of education, nevertheless she knows that before a fact can be applied it must be known; and we all know that any one who is able to make accurate observations and classify them with reference to some leading feature, is able to do scientific work. To the average teacher then, I would say, begin the study of children by selecting some topic closely associated with your school work and in which you are especially interested. If possible get hold of the best investigations on the subject, which you will now be able to read with intelligence and appreciation. Compare these with your own studies. It may have required several years but you have been happy in your work and have been



growing all the time. Child-study to be most helpful to the teacher must be closely connected with the daily lessons and duties, and yet it should have enough additional material and thought to give interest and life, and enable the teacher to become more and more efficient. We should not forget that it is not what we read and hear, valuable as that may be, but what we think and do that give us strength and character. We should read the literature by all means, but more than that, we should digest and classify it, using it to strengthen and broaden our ideas or to weaken and modify our views. Among the more practical subjects for the present I should place ; The physical development of the child, including food, health, defects and remedies, exercise and the sanitary condition of the school buildings ; Influences at work in the formation of character ; Discipline and punishment ; The proper use to be made of the play instinct and motor activity ; Children's interest, in the various subjects of study, in outside work or play, and their bearing on education ; Peculiar and exceptional children ; Children's forms of expression, language, drawing, writing, etc. ; Fatigue and proper arrangement of studies. All these subjects and many more will be found practical in any community where the teachers are imbued with the progressive spirit.

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### PRIZE CONTESTS.

CHAS. A. MCMURRY.

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In the discussion of moral education that has been common of late, it has been difficult to harmonize the higher moral incentives with our prevailing habits of prize-giving and of honors and distinctions conferred for high attainment in studies.

Some of the propositions which have gained general recognition may be stated as follows : It is a healthy and hopeful attitude of mind in children which shows itself in a vigorous and enjoyable absorption in their studies. When the studies themselves have an attraction for children and they show a spontaneous interest in their lessons, the mental condition is normal and healthy. If all children could be brought into this state of mind with regard to all school exercises, the most important and difficult problem for teachers would be solved.

But as we find in practice that many children do not possess such a natural liking for study, we resort to artificial or external incentives to stimulate effort. Head marks are given, prizes are offered. A marking system is devised for the purpose of enhancing the credit of some and of emphasizing the discredit of others. A system of artificial rewards and penalties is enforced which appeals to a totally different set of motives than intrinsic interest in study, or a development of taste and appreciation for science or literature or geography. It will scarcely be denied that this is a lowering of the moral standard of the school.

The first standard set up above (the cultivation of a natural vigor and spontaneous interest in studies) is an *ideal*, attainable in at least a few cases. In this case, study is its own reward, because the activity itself is hearty and agreeable and because a growing scientific or literary or artistic interest is awakened which will call for continued effort along the same paths.

The second standard is manifestly on a lower level. For the lack of or in lieu of this ideal interest it puts the spirit of rivalry, of emulation, of competition, and it further defends this standard by saying that it is the prevailing standard in our business, professional and even social life. Competition is held to be the mainspring of our commercial activities and when the children go out into the world, they will inevitably have this spirit to reckon with. But the advocates of high ideals in education are not without resources even against such a knock-down argument as this.

In the first place, the economists and social reformers themselves are not convinced that the principle of competition will solve our chief problems. In the second place, Christianity has set up a principle of altruism that already operates powerfully in society. In the third place, there are manifest evils attending the operation of the prize system in schools which will cause any honest teacher to be ashamed of it.

An example of the bad influence of such a prize system was witnessed by the writer in one of the counties of this State during the past summer. Each township of the county selected by a local contest a speaker to represent the township in a second contest between the contestants at the county seat. The speeches delivered were supposed to be original and were to be marked upon five points, one of which was originality. Three valuable prizes were offered for the three who stood highest in the con-

test. The writer acted as one of three judges. Before the program had gone very far the writer became convinced that wholesale plagiarism was the leading distinction of some of the papers, and when the last of the twelve contestants had finished, the one strong impression upon the present writer was that at least half the children in this contest had been systematically trained to deception and fraud by palming off upon the public for original productions, speeches which were mainly written by other and older persons. As soon as the decision of the judges was rendered, the writer consulted one of the other judges and found that his impression of the fraudulent character of the speeches was the same. So far as we were able to estimate the quality of this contest, it was thoroughly immoral in its influence. Yet the large audience seemed to think that the contest was an unusually fine, and successful one. It was not possible to tell just how much fraudulent material was incorporated, without credit, into these ostensibly original speeches. But in my judgment there was enough of it to throw discredit and the charge of dishonesty upon about half of the teachers and pupils directly concerned. Moreover, these were felt to be the best representations of the schools of the county.

It may well deserve our time to inquire whether such prize contests necessarily lead to the results which I have attributed to this one. That they lead to still other heart burnings and bitternesses between the contestants will be allowed, but it may be upheld with some justice that young people must learn to give and take in this kind of rivalry.

In spite of the public approval and satisfaction with which this contest was received, it seemed to me a positive discredit to our public school system and discouraging to those who try to think well of our schools and teachers.

There are undoubtedly much better interests in education than those of simply coming out ahead in debates and contests. Locke pointed out long ago that a love for truth is not generated by such rivalries.

Normal, Illinois.

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" O sun and skies and flowers of June  
Count all your boasts together,  
Love loveth best of all the year  
October's bright blue weather."

—H. H.

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**DEPARMENT OF PEDAGOGY.**

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**THE LAW OF THE SCHOOL.**

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**O. L. LYON.**

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In what does the law of the school centre? Does it rest in the trustees, or directors? Can it be said to rest in the superintendent, or teacher? All these do sometimes act as if they really were a law to the school themselves. But when viewed in the proper light it seems that they are only means. The law centers in the pupils. The pupil has needs. He wants to be something which he is not. There is a tension between what he is and what he desires to be. The unity of this real and ideal self is the law of the school. The pupil desires to make his present self at one with what he would like to be. There is a certain energy in the pupil which urges him to adopt the best means by which to realize himself. But this energy must work in accordance with the demands of life in order to attain the highest things.

This law controls and even suggests what externals are necessary. In fact, every act of every agent in its school system should be controlled by this inherent law. Voters, trustees, directors, boards, superintendents, teachers and all connected with the school system should work for the best interests of the pupils. Yet how often is this law set aside for some trifling consideration. Political prejudices often interfere with the best interest of the pupil. Politics may cause the least qualified of two school officers to be elected again, the school officers may permit themselves to be swayed by politics in the selection of teachers. Frequently they put in relatives simply because they are deserving teachers. Ofttimes pecuniary considerations such as increased patronage at the store or more law or medical practice sways boards. It must be admitted that at times almost anything is considered but the interests of the pupils.

That which is perfect has not yet come. Underbidding! Some, yes, many directors think they can get a good teacher for a few dollars. They weigh teachers on agricultural scales and then forget to double the result in consequence of the time being halved. Do parents and directors hire cheap, unskilled doctors when their children are sick? Then, is the body more than the

mind? Teachers doctor for this life as well as for eternity. This requires scientific and professional skill. Such cannot be acquired for nothing. Ability and skill demand good wages. Let quackery cease and pupil's interests be consulted. Remember that it is mainly through unity of teacher and pupil that the pupil's ideal and real self are brought into unity. The teacher should be the pupil's ideal self. But the usual class of underbidders do not appear to be very ideal.

School consciousness should become more sensitive. Parents usually think well of their children and mean to do well by them. Their neglect of children in selecting poor teachers for them cannot be said to be willful. They think that almost anyone *claiming* to be a teacher *is* a teacher and of course will do. They are uneducated in this line. In fact, they give such matters little thought. In their own particular occupations they are skilled and can discriminate. They are so accustomed to dealing with tangible things that the intangible escapes their notice. How much better then would it be and how much more reasonable if only school men would be elected as school officers. Every man to his business, should be the motto.

The basal law of the school controls not only the actions of school officers but those of superintendent and teachers. It demands that these have both a scientific and professional training. It demands that they have broad ideals and be devoted to the interests of their pupils. They should see to it that the conditions are all favorable for perfect unity between them and the pupils, for it is in this unity that the law of the school is best worked out. There must be sympathy between teacher and pupil, an enthusiasm for the pupil's good, personal contact, pleasant and attractive surroundings, means of husbanding the energy of both teacher and pupil, and also proper instruments to carry on the school process in order to have this unity between teacher and pupil. The interests of the pupils decide how the teacher shall spend his time, whether in careful preparation or engaging in the frivolities which sometimes attend life. These interests also decide whether he should be or do *anything* which is in the least questionable. The teacher should represent the highest type of life, inculcate the highest ideals and be devoted to the interests of his pupils.

The law of the school demands about the same of the superin-

tendent as it does of the teacher. He should have the same if not higher scientific and professional qualifications. In addition he should have a knowledge which particularly fits him for his work of supervising. It is clear that such a knowledge is quite different from that required in mere departmental work. In selecting his teachers he should be guided solely by the interests of the pupils. He is to come in contact with the pupils through the teachers, hence it behooves him to have proper media. In assisting teachers he should never play the bigot. The closest ties of sympathy and unity should bind teacher and superintendent, the same that exist between teacher and pupil. The assistance should be rather one of inspiring to higher ideals and leading them on to greater efforts.—*Missouri School Journal*.

Steeleville, Missouri.

## PRIMARY DEPARTMENT.

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the Anderson Schools.*

### AN AUTUMN SONG.

The song birds are flying  
And southward are hieing,  
No more their glad carols we hear.  
The gardens are lonely—  
Chrysanthemums only  
Dare now let their beauty appear.

The insects are hiding—  
The farmer providing  
The lambkins a shelter 'from cold.  
And after October  
The woods will look sober  
Without all their crimson and gold.

The loud winds are calling,  
The ripe nuts are falling,  
The squirrel now gathers his store;  
The bears, homeward creeping,  
Will soon all be sleeping  
So snugly, till winter is o'er

Jack Frost will soon cover  
The little brooks over;  
The snow-clouds are up in the sky  
All ready for snowing;  
—Dear Autumn is going!  
We bid her a loving "good bye."

—Selected.

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DISCIPLINE.

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There is no one thing in which the schools of the present differ from those of a generation ago, more than in the matter of discipline. In no way has any change in our schools been more hopeful than in this,—that the children are more nearly treated as if they were able to comprehend principles underlying true obedience and that a comprehension of this idea is one of the surest means for giving us orderly boys and girls and law-abiding, self-respecting citizens.

Probably we have gone to an extreme in this notion of a child's own interest being the determining factor in what he does. It is not unusual to step into a school in which one feels that the child instead of learning how to control himself is simply losing what little power in that line he already has. The teacher insists that conduct must proceed from within outward and that in no way will she urge, or force him to do differently from what he desires to do. She says that he must be treated as a rational being.

It may be in the change that has come over our educational notions that we have gone to an extreme in this matter. To assume that as far as the child's conduct is concerned he is able to determine for himself what he should do, is assuming more in that direction than is assumed in any other line. The writer has probably a somewhat old-fashioned notion of discipline, but it is based upon two things, first, that while the child is to become a rational being, he is only potentially so in the beginning. Anyone who has observed children has seen this, that instead of being able to consider carefully, reasons for and against any given thing, they are almost without exception, subjects of caprice. In the second place the after conduct of individuals is determined very largely by the habits formed in childhood and youth. This is readily seen in the pupil's use of English.

The parent or teacher who waits until the child can understand the reasons for the correct use of seen and saw, went and gone, is and are, was and were, etc., finds that the very period when a child could best master these little details has been used by the child's using incorrect English until it has become a habit with him. No intelligent mother or teacher undertakes in the beginning to explain the reason underlying these verb-forms, but

insists that the child must learn through sheer force of example and imitation the correct use of these words. I think the same plan of inculcating true notions of obedience, of respect to law is also followed by this same intelligent teacher and mother. Long before the child is able to comprehend the true reason for doing what his mother asks him to do, or what occasionally a teacher may require, he does from the habit which he has formed of implicit and swift obedience to the requirement that is made. This is simply in harmony with all the other incidental teachings he has had in the home. No parent waits for the child to understand the reason for wearing clothing before he is required to wear clothing. The intelligent parent insists that the child shall go to bed at a certain time in the evening long before the child is able to realize the necessity for so doing. The mother insists also that the child shall learn to eat his meals with his elders instead of taking them at any time during the day that he may wish. If indeed, the child did not form these habits long before he was able to understand the reason for them, habits of regularity, systematic living would probably never be formed at all. It seems foolish to expect a child to exercise proper judgment in all matters concerning his welfare, and it is for this reason that papers and magazines are published to help mothers to have a more thorough insight into the needs of the child and to see that such habits are formed early in life.

The educational experiment now being made at Chicago University is interesting because of its attitude upon this line. The children may be as indifferent as they please, may or may not attend to the work presented and may do something very different during the recitation period, than the legitimate work of that time which the teacher is presenting. The following paragraphs written by Geo. P. Brown in the *Public School Journal* indicate what I mean :

"There was little power of self-control manifested in those exercises in which the muscles were not employed. In fact, in the oldest class there was the least regard shown to those rules of decorum that make community life enjoyable. There was apparently little sense of obligation to the class or the teacher. Whether they disturbed the class or annoyed the teacher by their disorder and inattention, was a matter of no thought or concern to them. Some evidently did not enjoy having problems set for



them by the teacher, and they felt perfectly free to set for themselves other problems as their spontaneity might direct, oblivious of the restraints upon their spontaneity which the laws of order impose.

"To illustrate: A girl about ten years of age had no interest in what the teacher was presenting or the members of the class were saying. She devoted her energies to experimenting with an empty chair, tipping it forward and letting it fall back against the edge of the table with a sharp report every time it struck. This, no one seemed to notice, but it was easy to see that the teacher felt the disturbance. The child was evidently unconscious of doing a wrong thing, and seemed equally unconscious that there was a right thing for her to do. These children all came from families of culture and refinement, being most of them, children of professors and others connected with the university, or of their friends. They were not 'wilful' in any sense. They simply did what their interest or spontaneity prompted. Duty was an idea that did not 'rise above the threshold of consciousness.' "

Does it not seem that the particular girl in question is forming an unfortunate habit of attending or not as she pleases; that if this work continues for four or five years in this girl's life, this habit of inattention may be so strong that she will never be able to do careful, consistent, thoughtful work unless that work is presented in such a way as to be of overpowering interest to her? If these boys and girls belonged to the poorer, more ignorant classes of people in Chicago and would at the end of five or six years drop out of school entirely, what would be their notion of obedience to law? Does it not seem that the habit they have formed of doing exactly as they please or nearly so, would in a measure be the determining thing in their after life as citizens? This is the very thing which already to too great an extent characterizes the public life of America. It is a costly experiment after the school-life is over to try to show these people that obedience to law, even if we do not use the reason for it, is absolutely the essential thing in a citizen.

Now, I do not mean to urge that the old regime of the ferule and the rod was by any means the best solution of this problem, but it is a question if we are not tending toward lenient discipline with our common schools. It is frequently the case that

the teacher who is unable to have a respectful, orderly school is one of those who professes to believe that the children should not be unduly influenced in any way in their conduct. It is part of the business of the teacher (probably instead *part* I should say *all*) to help the children to set up ideals to be reached and she should have so fully the confidence of the children that they will believe with her that these ideals are the right ones. She should also be able to present these ideals in an attractive way, at first at least. The children should feel that they have helped to do this with the teacher and that it is not an entirely extraneous affair. But occasionally a boy will be found who persists in thinking that orderly going up and down stairs is something which deprives him of a certain amount of his personal liberty. He is sure there is nothing wrong whatever in throwing snowballs on the school ground, and he is just as sure that when he has prepared his work as fully as he thinks necessary in school, that it is entirely proper for him to whisper to his neighbor, to read any kind of novels he may bring with him, or to help furnish amusement for the other pupils in his neighborhood. When this boy cannot be made to see that he is violating the rights of others and that when he lives in a community he must subject himself to community regulation, some other course must be followed. What that may be, the individual teacher must decide. But in an average school of fifty pupils, he will have to subject himself to the ordinary requirements made, or he must drop out of the community of which he is a part.

So in beginning our school work this fall, let us bring into it all the enthusiasm and love for the children that we can command. Let us be full of the idea that in so far as practical the children must help to form their own ideals and must just as assuredly help to work them out. On the other hand we must not forget that one thoroughly lawless individual will almost counteract all the good the teacher may do in a school. So it is by far the best to have few retrenchments to make and to insist from the beginning that reasonable requirements must be followed.

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#### BEGINNING READING.

Do not forget that the first reader does not contain sufficient material for the beginning class in this work. In fact no first reader could be made of convenient size for a child that would

contain all the necessary lessons in teaching him to read, if the child has a thoroughly wide-awake teacher. Each teacher can usually outline for herself the lessons which she wishes to teach much better than any one else can do it for her. However, some suggestions may be helpful to new teachers. The following outline may suggest certain things that may be taken up at this season of the year:

1. Fruits.—Apple, grape, pear, plum, corn, etc. In considering these the children may talk about the time when they saw the blossoms, how long ago that has been, of the months of heat, and showers of rain that have helped to bring these fruits to be what they are now.

2. Trees.—Their leaves, preparation for winter, the small buds in the axils, how much the trees have grown in the summer, etc.

3. Flowers.—Sunflower, wild purple aster, golden-rod and other common fall flowers. It is helpful to see the entire plant, the kind of roots, where the plant grew and other features of its life.

4. Birds.—What birds are now seen, the meetings preparatory to leaving, why they leave, where they go, what birds stay during the winter, what ones come to spend the winter with us, etc. A very helpful book in the children's Reading Circle this year is one "In Birdland," by Leander S. Keyser, and will supplement what the children may find out.

5. Weather.—The rain, frost and its effects; the first snow, what snow does; the north wind, etc.

6. Hiawatha is distinctively a child's poem and reading lessons on the canoe, wigwam, blanket, feathers, paint, squirrels, rabbits and other animals are interesting and helpful.

7. Stones, rocks, pebbles, etc., are always at hand during every season of the year as a phase of nature work that may be taken when other forms can not be obtained.

In connection with any one of these subjects, myths, legends and stories given to the children in connection with the object are a never failing source of interest to the child. The teacher's own fancy and imagination must help her to arrange her work to bring out all the pleasing and unusual features of the object under consideration. She is certainly at liberty to talk about baby leaves being wrapped up nice and warm in the little buds to

be kept there until next spring ; she may imagine conversations which the birds hold when they in great droves meet in the trees before leaving this fall. Certainly, too, the frost may be personified and all pranks usually attributed to it may be put in such a way as to enlist the child's hearty sympathy. In fact the skillful teacher will take advantage of this element of fancy and imagination in the reading work.

It hardly seems necessary to say that the teacher who can draw the fruit or the flower, the bird, the tree, the snow-storm or canoe has a great advantage over the one who can not do this. No special drawing teacher is needed for this work. It can come only by continuous practice in the work. I have seen primary teachers who never had any instruction in drawing and who began by copying the simplest pictures on the board, who by the end of the first year were quite ready in illustrating these lessons.

In beginning the reading work the teacher may wish to present a few (a very few) words at first by the word method, but just as soon as she can use the new words she wishes to teach in little stories with several old words, she will find it of great advantage. The children have greater interest in the work and they are constantly reviewing old words while learning new ones. During the conversation or nature lesson on the sun-flower, for instance, the teacher may put one or two new words on the board and thus help prepare the way for the reading lesson proper.

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### INDEPENDENCE IN EARLY READING.

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While noticing carefully the subject matter in the reading work, presenting it by word or sentence method or both, as the teacher sees fit, she certainly must see this thing, that the child must understand that letters stand for sounds in order to read independently. This means that the teacher must early introduce phonics in connection with the reading work.

It is usually necessary to begin this kind of work by breaking oral words into their parts, as for instance the teacher says to her children : "Put your hand on your n-o-s (e)." "Put your hand on your f-a-c (e)." "Touch your f-oo-t," and similar exercises. The whole point in this is for the child to see that what to him have been simple words may be broken up into

parts. The manner of putting this work may be in the nature of a game. The teacher wants to be sure that the child can also break oral words into parts and when he becomes somewhat ready in doing this he can take up phonic work proper. This is probably best begun by selecting some printed or written word which the child already knows. Let us say the word "box." We want to be sure first that the child can give distinctly the three parts in the oral word. When this is done, the teacher must lead him to see that the "b" stands for the first sound, the "o" helped by "x" stands for the second and "x" alone for the third. Of course she might put the breve over the "ø" and then have him see that this letter with its diacritical mark indicates the sound. But when he learns this he is no better able to know the sound for which the "o" in *fox* stands than he was before he had the "o" in *box* unless the teacher again puts the mark over the "o" in *fox*. But if he has seen that the "o" helped by "x" sometimes at least says "ø," he is certainly more likely to know the sound of the "o" in *fox*. The teacher may present this in a very happy way by suggesting that "o" is a queer little fellow, perhaps, and you cannot depend upon what he is going to say. You can only know this by finding who comes after him. When "x" alone is the one that follows you may be pretty sure that he says "ø."

The teacher must realize that this phonic work is very essential indeed for the child's rapid advance in independent reading. Quite soon little first year children ought to be able to work out simple new words by knowing the sounds for which the letters stand. He may learn the sound for which groups stand, as *at*, *and*, *an*, *all*, *ed*, *ack*, *ide*, *ill*, etc., and this is very economical as far as both time and energy are concerned.

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Despise not any man that lives,  
Alien or neighbor, near or far;  
Go out beneath the scornful stars,  
And see how very small you are.  
The world is large, and space is high  
That sweeps around our little ken;  
But there's no space or time to spare  
In which to hate our fellow-men.  
And this, my friend, is not the work for you;  
Then leave all this for smaller men to do.

—Sam Walter Foss.

## LEND A HAND.

(This department is conducted by Mrs. E. E. Olcott.)

*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

### II.—NATURE WORK IN THE GRADES.

October gives a party "every year" and the leaves come by the hundreds dressed in their gayest colors. It is just the time to make a collection of leaves, acorns and nuts found in the region, of bits of bark and even of chips from different trees. The more ambitious can secure sections of wood showing the grain, but I wish to dwell upon the simple things that any school can do.

If the school yard permit, observe Arbor Day, and if possible plant some unfamiliar tree. There are counties where the magnolia and mountain laurel will live and bloom. In others a fir tree would be a novelty. Many children do not know a pine from a spruce. If the subject of getting a tree is agitated, it often happens that some one in school or in the neighborhood has friends through whom a tree—as the magnolia—could be secured at very slight expense. The object in getting an unfamiliar tree is to awaken a keener interest and a feeling of pride in ownership.

Then, too, such trees help the thought to travel away and away from the school yard southward to the companion trees of the yellow pine and magnolia, or northward to the land of the Norway spruce.

To know something of the names, homes and general characteristics of trees, flowers and birds is like being acquainted with many pleasant people. What a pleasure it is to walk along the street and greet acquaintances; what loneliness to mingle with many and recognize none.

To walk through field and wood and say: "What kind of trees are these, anyway?" "This is a pretty flower; I wonder what it is!" "That's an odd looking bird!" is like being a stranger to all.

But if one can say: "Here are some chinquapin oaks." "This is a dog-tooth violet." "There's a red-headed woodpecker;" it is like saying, "Good morning, Mr. Smith," "How

do you do, Mr. Brown," Glad to see you, Mr. Jones." It makes the world brighter, gives one a pleasant thrill and a home-like feeling.

In nature lessons, bird study offers a wide and interesting field. But I approach it with misgiving, for in the popular mind boys are classed as bird enemies. It seems to me that lessons about the animal kingdom should be prefaced by a course of Humane Society literature. Every child should know and *feel* the motto: "Kindness, justice and mercy to every living creature." We should feel that every harmless living thing has, jointly with mankind, "a right to life, liberty and the pursuit of happiness," and dangerous creatures have a right to a painless death. Children should study as *nature lovers*, not as scientists. The knowledge that is gained by robbing nests to make collections of eggs, killing birds to obtain stuffed specimens, and sticking pins through butterflies to mount them—such knowledge costs a great deal. Does it not cost too much? Let us be bird lovers and study them as Olive Thorne Miller suggests in "Little Brothers of the Air."

Begin at once to make a list of birds which the children, with their own eyes, have seen in the neighborhood. As with wild flowers, those whose names are not known can be noted by a brief description. Some birds are to be seen only as they pass north and south in spring and fall. Set keen, bright eyes watching to find out what birds remain all winter. Encourage them to keep an eager look-out, to note which birds come first in the spring, to see who will be first to see the earliest bird. Lead them to be quick-eared to learn every bird song; quick-eyed to note the habits of bird families. Encourage pupils to watch for years to learn which birds build near houses, and which far from them; which eat insects and which seeds.

In the last legislature two law-makers argued warmly whether partridges eat grain or insects. If they steal the farmers' grain, then hunters do well to rid the country of them, but if they destroy insects which injure farm products, then hunters should be restrained. One was sure they ate grain; the other was equally certain that they lived upon insects! Do you fancy those representatives were city bred? Probably not, or they might have learned from studying nature in *books* that partridges belong to the great family of scratchers which eat both grain and insects.

Probably they had spent their lives in the country and had not studied nature, in-doors or out, and so were in a dilemma whether to legislate for or against the partridge. Why should not farmers' children be led to see that it is to their interest to study bird habits and know their friends from their enemies?

Farmers' institutes conduct a phase of nature study. A topic in one such institute was "Our Home Birds." Why should not a pupil from some country school have given a little talk or read a brief essay on that subject? Not to teach the farmers anything but to "train up the children in the way they should go."

I have tried to suggest simple, practical ways to interest, especially those fortunate children whom "nature surrounds" in learning facts at first hand, and then trying to find them in books, or when they read an interesting bit of information seek to verify it from observation.

I have asked a number of people whether the red-headed woodpecker spends the winter in Indiana. About one-third of them said that it does, another third that it does not, and the rest that they had not the slightest idea. Of two brothers, both grown, one was sure that the woodpecker stays all winter; he had seen it in January, the other had never seen one even late in the fall, and insisted that his brother was mistaken. Do *you* know whether they migrate? Do your pupils know? If the location of your school permits, why not watch this winter and see for yourself?

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### THE FIFTIETH BIRTHDAY OF AGAZZIZ.

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It was fifty years ago

In the pleasant month of May,  
In the beautiful Pays de Vaud,  
A child in its cradle lay.

And Nature, the old nurse, took  
The child upon her knee,  
Saying: "Here is a story-book  
Thy Father has written for thee."

"Come, wander with me," she said,  
"Into regions yet untrod;  
And read what is still unread  
In the manuscript of God."



And he wandered away and away  
With Nature, the dear old nurse,  
Who sang to him night and day  
The rhymes of the universe.

And whenever the way seemed long,  
Or his heart began to fail,  
She would sing a more wonderful song,  
Or tell a more marvelous tale.

So she keeps him still as a child,  
And will not let him go,  
Though at times his heart beats wild  
For the beautiful Pays de Vaud ;

Though at times he hears in his dreams  
The Ranz des Vaches of old  
And the rush of the mountain streams  
From glaciers clear and cold ;

And the mother at home says, " Hark !  
For his voice I listen and yearn ;  
It is growing late and dark,  
And my boy does not return ! "

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### DESK WORK.

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#### QUESTIONS FOR THE BIRD CLASS.

[The following questions about birds are selected from the many excellent ones in "Introductory Guide to Nature Study," published by A. Flanagan, Chicago].

1. What birds have you seen this summer that you know will leave before cold weather?
2. In what direction will they migrate? Why choose that direction?
3. Do all birds migrate at the same time?
4. Do you miss any that you saw early in September?
5. Which, according to your observation, was the first to go?
6. What birds remain during the winter? What place do such birds frequent? How do they get their living?
7. If the sparrow can remain in safety, why can not the robin?

8. Do you know whether any birds migrate to us for the winter?

Teach your pupils to answer these questions in such a way as to produce a smooth-sounding essay, that is, one that will conceal the fact that it is a series of answers to direct questions.

Interest them in watching the migration of birds, and in December give the same questions again, and add these:

Which birds left in September?

In October?

Were all gone by November?

Which were the last to go?

#### A VISUALIZING EXERCISE.

In his primary arithmetic, Mr. Speer suggests many sense training exercises, one of which is as follows:

Three objects, a book, a box, and an ink bottle are placed on a table. The attention of the children is centered upon them and the following directions given:

1. Look at the three objects carefully, one after another.
2. Close your eyes and picture one after another.

(Cover the objects.)

3. Think the objects from right to left. From left to right.
4. Name them from right to left. From left to right.
5. Which is the third from the right? The second from the left?

As the power of the pupils increases, a fourth and a fifth object are added. When five can be readily held in mind and pictured in any order, another group of five or less is substituted, and like questions asked. Mr. Speer says, "When four or five groups can be distinctly imaged these exercises might give place to some other."

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The following indicates how his suggestions may be adapted to a special study or grade. Suppose your pupils are interested in leaves, and have been collecting and pressing them. Mount five good sized leaves upon separate pieces of cardboard. Place them before the class in, for instance, the following order: An ash, an oak, a beech, a maple and a poplar leaf. Direct the pupils to observe carefully, close the eyes and image clearly, and then (the leaves having been covered) write the answers to the following:

1. Name each leaf in the group from the right. From the left.
2. Name the middle leaf in the group.
3. The third leaf from the right.
4. The third from the left.
5. Name the first leaf from the left.
6. Name the fifth from the right.
7. Name the fourth from the left.
8. The fourth from the right.

## **ARBOR DAY PROGRAM.**

OCTOBER 29, 1897.

Governor Mount has appointed Friday, October 29, as Arbor Day for Indiana. He has issued a proclamation to this effect, which every teacher can find on page 44, "Outlines for Township Institute Work." State Superintendent Geeting adds an urgent appeal to all teachers and school officers to observe the day. We trust that the observance will be general, and that the children who take part on this happy occasion may live to see the young and tender trees planted October 29, 1897, become mighty monarchs whose wide-spreading branches may shelter hundreds of people from the scorching rays of the summer sun.

FOR THE BLACKBOARD :—

" Plant trees, plant trees on Arbor Day,  
Along the shadeless, dusty way ;  
Who plants a tree shall surely be  
A blessing to humanity."

### 1. SONG..... Air—America

Of Nature, broad and free	To all that meets the eye,
Of grass and flower and tree	In earth or air or sky,
Sing we to-day.	Tribute we bring.
God hath pronounced it good	Barren this world would be
So we, his creatures, would	Bereft of shrub and tree
Offer to field and wood	Now gracious Lord to Thee
Our heartfelt lay.	Praises we sing.

### 2. READING OF THE GOVERNOR'S PROCLAMATION.

### 3. RECITATION..... An Arbor-Day Tree

Dear little tree that we plant to-day,  
What will you be when we're old and gray ?  
" The savings bank of the squirrel and mouse,  
For robin and wren an apartment house,

The dressing room of the butterfly's ball,  
 The locust and katydid's concert hall.  
 The schoolboy's ladder in pleasant June,  
 The schoolgirl's tent in the July noon.  
 And my leaves shall whisper them merrily  
 A tale of the children who planted me."

—*Youth's Companion.*

4. RECITATION.....What Do We Plant

What do we plant when we plant the tree?  
 We plant the houses for you and me.  
 We plant the rafters, the shingles, the floors,  
 We plant the studding, the lath, the doors,  
 The beams and siding, all parts that be;  
 We plant the house when we plant the tree.

What do we plant when we plant the tree?  
 A thousand things that we daily see.  
 We plant the spire that out-towers the crag,  
 We plant the staff for our country's flag.  
 We plant the shade, from the hot sun free;  
 We plant all these when we plant the tree.

—*Henry Abbey.*

5. READING.....How One Tree Was Planted

When Alice and Phebe Cary, the two poets, who have written beautiful poetry that everybody loves, were little schoolgirls they planted a tree.

They were coming home from school one day, when they found a small tree that a farmer had thrown down beside the road to die. One of them picked it up and said to the other, "Let us plant it." Then they took some sticks—for they had nothing else to dig with—and dug out the earth, and planted this little forsaken tree with their tiny hands, and pressed the earth around it with their little feet.

Every day they hurried to it on their way to and from school, to see if it was going to live. How they clapped their hands with delight when they saw the buds start and the leaves begin to form!

When these girls grew up to be famous women, they never returned to their old home in Ohio, without hunting up this tree they had planted, and which they loved very much. It grew up to be a large and beautiful sycamore.

6. TREE CATECHISM.....By Teacher and Pupils

1. Is bark thicker on one side of a tree than another?
2. How many distinct layers can you find in bark?
3. What is the purpose of the different layers?
4. What commercial products are made from certain barks?
5. Are there any barks having medicinal value?
6. How many purposes has birch bark served?
7. Why are hemlock and oak bark used in tanning leather?

## 7. RECITATION ..... An Old Custom Revived

The origin of Arbor Day is attributed to the State of Nebraska. But in an old Swiss chronicle, it is related that away back in the fifth century, the people of a little Swiss town called Brugg assembled in council and resolved to plant a forest of oak trees on the common. The first rainy day thereafter, the citizens began their work. They dug holes in the ground with canes and sticks and dropped an acorn into each hole, trampling the dirt over them. Upward of twelve sacks were sown in this way and after the work was done each citizen received a wheaten roll as a reward.

"Great oaks from little acorns grow," it is said, but for some reason the work was all in vain, for the seeds never came up. Whatever the cause, the acorns refused to sprout and the townspeople sowed the same ground with rye and oats, and after the harvest tried the acorn-planting again—this time in another way—by plowing the soil and sowing the acorns in furrows. But again the great oaks refused to grow; grass came up instead, and the people were disappointed. But an oak grove they were determined to have, so after this second failure a few wise men put their heads together and decided to gain the desired result by transplanting. A day was appointed (in October) and the whole community, men, women and children, marched to the woods, dug up each an oak sapling, and transplanted it on the common. At the close of the exercises each girl and boy was presented with a roll, and in the evening the grown people had a merry feast in the town hall.

This time the trees grew, the people of Brugg were pleased and satisfied and instituted the day of tree-planting as a yearly holiday. Every year as the day came round, the children formed in line and marched to the oak grove, bringing back twigs or switches, thus proving that the oaks were thriving, and every year at the close of the parade, the rolls were distributed to be eaten in remembrance of the day. This festival still exists and is known as "The Switch Parade;" our Arbor Day is only an old custom revived.—*Christian at Work.*

## 8. ESSAY ..... Subject—Historic Trees

## QUOTATIONS :—

[By pupils who rise from their seats, and recite without being called upon.]

9. " Oh, pause and think for a moment  
What a desolate land 'twould be ;  
If east or west the eye should rest  
On not a single tree." —Gray.

10. What a noble gift to man are the Forests ! What a debt of gratitude and admiration we owe their beauty and their utility ! How pleasantly the shadows of the wood fall upon our heads when we turn from the glitter and turmoil of the world of man !

11. A thousand miles of mighty wood,  
Where thunder-storms stride fire-shod ;

A thousand plants at every rod,  
 A stately tree at every rood ;  
 Ten thousand leaves to every tree,  
 And each a miracle to me—  
 Yet there be men who doubt of God !

—*Joaquin Miller.*

12.       He who plants a tree  
           Plants a hope.  
           Rootlets up through fibres blindly grope ;  
       Leaves unfold into the horizons free.
13.       He who plants a tree  
           Plants a joy ;  
           Plants a comfort that will never cloy—  
       Every day a fresh reality.
14.       He who plants a tree,  
           He plants peace.  
           Under its green curtains jargons cease,  
       Leaf and zephyr murmur soothingly.
15.       He who plants a tree,  
           He plants youth ;  
           Vigor won for centuries in sooth ;  
       Life of time that hints eternity !
16.       He who plants a tree,  
           He plants love ;  
           Tents of coolness spreading out above  
       Wayfarers he may not live to see.
17.       Gifts that grow are best,  
           Hands that bless are blest ;  
           Plant : Life does the rest !  
       Heaven and earth help him who plants a tree,  
       And his work its own reward shall be.

—*Lucy Larcom.*

[Let the pupils make their way to the spot where the tree is to be planted. It is a beautiful thought to name the tree after some person who stands for good works and high thoughts in your neighborhood. As the tree is being placed in the ground and named, let the school sing to the air of America]

18.       “Come, let us plant a tree  
           Tenderly and lovingly,  
           Some hearts to cheer ;  
           Long may its branches sway  
           Shelter sweet birds alway  
           Long may its blossoms say  
           Springtide is here.

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Let one pupil step forth and facing the other pupils recite

19.

Grow as the trees grow,  
Your head lifted straight to the sky,  
Your roots holding fast where they lie,  
In the richness below ;  
Your branches outspread  
To the sun pouring down and the dew,  
With the glorious infinite blue  
Stretching over your head.  
Receiving the storms  
That may writhe you, and bend but not break,  
While your roots the more sturdily take  
A strength in their forms.

20. SCHOOL IN CONCERT :—

" Thank God for noble trees !  
How stately, strong and grand  
These bannered giants lift their crests  
O'er all this beauteous land."

For additional suggestions see "Outlines for Township Institute Work."

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## EDITORIAL.

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### MUSIC IN THE COMMON SCHOOLS.

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There seems to be a tidal wave in favor of teaching music in the country and village schools. Never before were there so many institutes in which instruction in this branch was regularly given. This movement has been greatly assisted by the State Musical Association. In many counties the County Boards have ordered that music be taught regularly. The JOURNAL heartily endorses this movement.

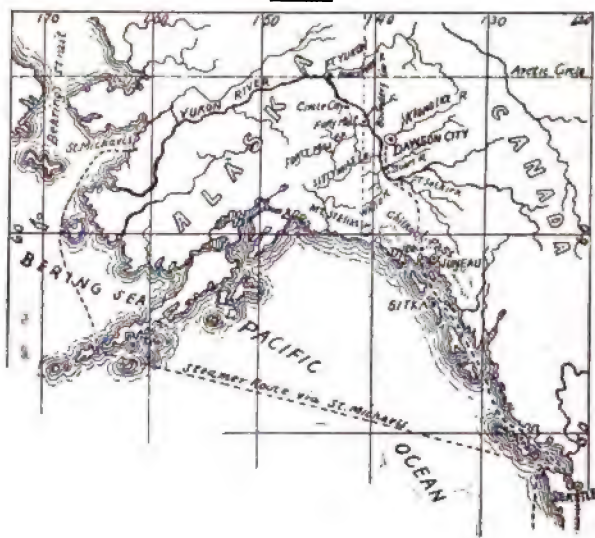
The teaching of music in the institutes can be greatly improved. Most of the music instructors take it for granted that the teachers know nothing at all about music, and so begin at the beginning and take up time in explaining lines, spaces, staff, scale, names of notes, rests, pitch, where the half steps occur, etc., etc, and next year they begin at the same place and go over the same ground.

The JOURNAL wishes to suggest to these instructors that it would be better to take it for granted that teachers know these elements and spend the time in teaching the teachers how to teach the subject.

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THE State Board of Health, through its able secretary, Dr. J. N. Hurty, of Indianapolis, is doing much toward securing better sanitary conditions of the school rooms and premises. There is no doubt but the schools are the sources through which contagious diseases are most commonly spread. One of the rules of the board requires that everything about the schools be frequently cleansed and disinfected. Teachers should promptly and faithfully carry out all these regulations.

## THE KLONDIKE.



Klondike is a new name in Geography. Until within a few months it was only known to a few Indians and miners. In August, 1896, the first gold find was made but it was nearly a year before its richness became generally known. It will be seen by the above map that Klondike is the name of a little river or creek that empties into the Yukon River, and that Dawson City is situated at the junction of the two streams. It will also be seen that Klondike is on the British side of the boundary line between Alaska and Canada. Until quite recently the centre of this mining region was Circle City, but the recent large finds of gold in the region of the Klondike make Dawson City, 200 miles further up the Yukon river, the Mecca to which thousands of feet are turned. Gold has been found in many places in this region and it is believed this entire section is rich in gold and other minerals.

It will also be seen that Klondike is within two or three degrees of the Arctic Circle, which suggests very vividly the "midnight sun." It is said that in the summer it is never so dark, even at midnight, that one cannot see to read—so strong is the twilight in clear weather. Winter lasts nine months in the year and yet in the short summer the temperature has been known to rise to 90 degrees. Only a few kinds of vegetables will mature here. The region is desolate and generally barren.

The great problem is how to reach this "land of gold." Two routes in the main are followed. Seattle is usually made the starting point. One route is all by water. Ocean steamers run to St. Michaels, on St. Michaels island, about ninety miles from the mouth of the Yukon river. From St. Michaels flat-bottomed boats run up the Yukon, a distance of nearly 2,000 miles. The Yukon is only open to navigation three or four months



in the year. At present, plans are being made to use the Yukon as a roadway when it is frozen over and employ conveyances propelled by steam.

The distance from Seattle to St. Michael by steamer is about 3,000 miles, so the entire distance to Dawson City by this route is about 5,000 miles. And yet this is the route by which almost all provisions and supplies must go. Owing to the expense of this water route, most people go by the other routes.

Juneau is the key to the Klondike region and the head waters of the Yukon. Juneau is a seaport and mining town of 2,000 inhabitants, about 1,700 miles from Seattle by steamer. From Juneau to Dyea, near the head of Chilkoot inlet, the distance is 100 miles. Here begins the overland route to Klondike over the Chilkoot pass.

This pass is at the beginning of the route, its summit being only 14 miles from Dyea. This pass rises to about 4,100 feet and is very difficult of ascent, and when covered with snow, exceedingly dangerous. After the mountain range is passed the country is barren and broken, and the head tributaries to the Yukon, including a series of small lakes, are followed. Small boats are used on some of these lakes and rivers for short distances. Indians constitute the only "packhorses." Each one will carry about 100 pounds. The distance from Juneau to Dawson City is about 700 miles.

Still another route is now being used and will probably become the main route. It is over the White pass, which is entered from Skaguay bay about 85 miles from Juneau. This pass is 1,000 feet lower than the Chilkoot and not so difficult. Already there is talk of running a railroad over this pass, and the probability is that in less than a year the Klondike region will be connected with Juneau by telegraph and telephone.

There are now about 5,000 people in and about Dawson City, and the problem is how to get them food to keep them from starving for the coming winter. Good authority says, "do not start before March, and under no circumstances start with less than \$500."

People before starting should remember the hardships—the cold by winter and the mosquitoes (the worst on the continent) during the short summer.

The above-named long distances indicate the immense size of Alaska. Not many people know that it is as large as all the United States east of the Mississippi river. The wisdom of its purchase has been thoroughly vindicated.

For further information on the Klondike see a little paper-covered book published by F. T. Neely, 114 Fifth ave., New York.

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#### TEACHERS' INSTITUTES.

The general character of the work done in teachers' institutes has changed entirely in the last twenty-four years. Twenty years ago the work was all academic, now, it is all professional. Twenty years ago the work was done almost exclusively by home talent, now, it is done almost exclusively by professional institute instructors. Twenty years ago the superintendent put the institute largely into the hands of the teachers allowing them to organize and elect officers, select committees, make programs, etc.

;

now, the superintendent keeps the institute in his own hands, selects the secretary, makes his program in advance, appoints the necessary committees, and thus saves a great deal of time. The writer, in visiting *thirty-five* institutes the past summer, has noted the following differences in the manner of conducting them.

Some superintendents are very prompt in calling to order and very prompt in calling and closing each exercise; others seem to lack the element of promptness, allow speakers to use as much time as desired and in this way frequently crowd out entirely other exercises. Some call the roll twice a day in the old-fashioned way and thus consume much time; some call by number and thus save time; some call the roll at the close of the day and require each to answer the number of exercises he has listened to; some call by townships; others seat the townships together and require the principal of the township to keep a record of attendance. This plan saves all the time.

A few have the minutes read twice a day; a few more have the minutes read daily; but a very large majority dispense entirely with the reading of the minutes.

Some begin early and work late with short recesses; a few begin late and close early and give long recesses; some have eight exercises a day; most have six; a few have but four. In Tippecanoe county two musical exercises, with a talk an hour in length between, comprised each half day's work. In Vanderburg county the institute opened at 8 o'clock A. M. and closed for the day at 12 o'clock. The prevailing sentiment seems to be in favor of three exercises each half day with a recess following each.

The writer is of the opinion that the institutes to-day are a very great improvement over those of "ye olden time," and yet he thinks there is room for further improvement. He is afraid that some of the instructors forget that about *one-fourth* the teachers come in *new* every year and are not able to adapt and apply abstract principles. He has listened many hours during the last summer to talks which were interesting in themselves, but which had almost no relation to the every-day work of the average teacher. At the conclusion of these talks he has frequently said to himself: "That was good, very good, but what in the world will these teachers do with it."

The institute instructor should keep in mind that most of his hearers have had but little or no experience in the application of principles, and they should take pains to show in what way the theories or facts they enunciate can be applied in teaching the common school branches.

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SPECIAL attention is called to the first article in this issue of the JOURNAL on "Imitations of Children." It is full of valuable suggestions to teachers. The article was written while Dr. Wissler was a student in Indiana University and it has the endorsement of Dr. Bryan. Teachers should note carefully the statement that children often do bad things without the *intention* of doing wrong. They do not premeditate and deliberately do many of the things that are often charged up to "pure meanness." If teachers will carefully study this article, they will certainly derive much help from it.

## QUESTIONS AND ANSWERS.

### STATE BOARD QUESTIONS USED IN AUGUST.

#### ARITHMETIC.

1. Multiply 325.946 by 3.14159, and perform your work in such a way as to retain 3 decimal places throughout your operation, and "no more." Give work in detail.

$$\begin{array}{rcl}
 325.946 \times 3 & = & 977.838 \\
 325.946 \times .1 & = & 32.594 \\
 325.946 \times .04 & = & 13.037 \\
 325.946 \times .001 & = & .325 \\
 325.946 \times .0005 & = & .162 \\
 325.946 \times .00009 & = & .029
 \end{array}$$

1023.985

2. Simplify  $\frac{5\frac{1}{2} \times 3\frac{1}{2} + \frac{1}{2} \text{ of } \frac{1}{2}}{4\frac{1}{2} + 2\frac{1}{2}}$ ; also reduce result to a whole number and decimal.

Answer, 2.7821+.

3. A coal dealer buys 150 tons of coal, 2,240 pounds each, at \$4.50 per ton. He sells it at \$4.75 per ton, giving 2,000 pounds per ton. What is his profit?

Answer, \$123, gain.

4. A plot of ground 320 feet long, 210 feet wide, is enclosed by a tight board fence 6 feet high. How many square yards in the surface of the fence?

Answer, 706 $\frac{2}{3}$  sq. yds.

5. A piece of property worth \$25,250 is assessed at  $\frac{7}{5}$  its value. What school tax does it pay when the rate is 2 $\frac{1}{2}$  mills?

Answer, \$38.716, tax.

6. Find the greatest common divisor of  $\frac{1}{2}$  and  $\frac{1}{3}$ .

7. If  $\frac{3}{4}$  of a barrel of flour cost \$5.25, what will  $\frac{1}{2}$  of a barrel cost? Give analysis.

If  $\frac{3}{4}$  of a bbl. costs \$5.25,  $\frac{1}{4}$  of a bbl. costs  $\frac{1}{3}$  of \$5.25 which is \$1.75, and  $\frac{1}{2}$  of a bbl. will cost 4 times \$1.75 which is \$7; then  $\frac{1}{2}$  of a bbl. will cost  $\frac{1}{2}$  of \$7 which is \$3.50.

8. I marked goods which cost me \$1.44 per yard so that I could deduct 10% from the marked price and still make 15% profit. What was the marked price?

Answer, \$1.84, marked price.

9. Find the face of a note, payable in 30 days, that will yield \$477.36 when discounted at 6%. No grace.

Answer, \$470.7587+, proceeds.

10. What topics usually in our "Complete Arithmetics" might be profitably omitted or treated but slightly? Give reasons for your opinion.

The subjects, alligation, annuities, arbitration of exchange, progressions, permutations, etc. These have no practical bearing upon business life.

## GEOGRAPHY.

(Answer five.)

1. *Into what oceans do the greater number of the great rivers flow?*  
Atlantic and Arctic.

2. *What physical characteristics have tended to make Africa a "dark continent"?*

(a) Large desert regions in the northern and southern parts, and an unhealthy forest jungle in the central part; (b) the general relief which produces rapids near the mouths of most of the rivers, thus preventing internal navigation; (c) the coast line has but few good harbors.

3. *What physical conditions marked the localities in which the great civilizations of ancient history began?*

The valleys of the Tigris, the Euphrates, and the Nile were the seats of the ancient civilizations of Chaldea and Egypt which mark the beginning of history. These valleys possess a dry, warm, almost rainless climate, and a soil of wonderful fertility which is made productive by overflows and irrigation.

4. (a) *What countries raise wheat for export?*

(b) *Which of the grains, wheat or rice, has the greater export value?*

(a) United States, Russia, India and Argentine Republic. (b) The relative value of the exports varies in different countries, but taken as a whole wheat is certainly first.

5. *Where and what is Crete? To what country subject? State briefly the cause of the recent disturbances.*

Crete is an island south of Greece. It is subject to Turkey. The recent disturbances were caused by an attempt on the part of the Cretans, who are mainly Greeks, to throw off the Turkish yoke and attach themselves to Greece.

6. *Into what sea or ocean do the following named rivers flow: Danube; Volga; Rhone; Rhine; Seine?*

The Danube flows into the Black Sea, the Volga into the Caspian, the Rhone into the Mediterranean, the Rhine into the North Sea, and the Seine into the English Channel.

7. *What is the Klondike? Why so much discussion about it at this time?*

The name Klondike was originally applied to a small river in the Canadian Northwest Territory. Since the discovery of gold in the vicinity of this river the name has been applied to the whole region surrounding that river.

## SCIENTIFIC TEMPERANCE.

(Any five.)

1. *What effect has alcohol on the stomach?*

Strong alcohol produces a congestion of the capillaries of the stomach, and ulceration and inflammation of the mucous lining.

2. *The continued use of alcoholic beverages has what effect on the digestion?*

The continued use of alcoholic beverages weakens and retards digestion by producing a morbid condition of the digestive apparatus, and by coagulating the pepsin of the gastric juice.

3. *Does the liver experience any of the deleterious effects of the use of alcoholics? If you think so state what they are.*

The liver increases in size. Its tissues become hardened and infiltrated with fatty deposits. In time it becomes changed into what is called "hob-nailed liver."

4. *What is morphia? What are some of the compounds of which it forms a part? For what is each used?*

Morphia is the active principle of opium. Paregoric, laudanum, and morphine are the chief compounds in which morphia is found. They are all used to deaden the nerves and produce insensibility to pain.

5. *Why is "fatty degeneration"—one of the results of the habitual use of alcohol—not to be desired?*

Because it interferes with the free and natural performance of the vital functions of the heart, the liver, and the kidneys, the organs generally most effected.

*What is chloral? What is the effect of its use?*

Pure chloral is obtained by treating absolute alcohol with chlorine gas. It produces paralysis of the nervous system, retards respiration and circulation, lowers the temperature, and brings on a profound sleep.

#### PHYSIOLOGY.

(Any six.)

1. *What tissues compose a fresh bone?*

Osseous tissue, fatty tissue, cartilaginous tissue, and connective tissue.

2. *State the effects of disuse and of excessive exercise upon the muscles.*

Disuse causes the muscles to become soft and wasted and to accumulate more or less fatty tissue; excessive use brings about a temporary loss of contractile power accompanied by more or less soreness.

3. *What functions does the skin perform?*

The skin protects the parts beneath it, gives form and beauty to the body, throws off waste matters, aids in regulating the temperature of the body, serves as an organ of special sense, and acts slightly as a respiratory organ.

4. *Why the necessity for frequent bathing?*

To remove dead cuticle and other matters, so as to keep the pores open for the discharge of certain waste materials.

5. *What changes must food undergo before it becomes living flesh?*

Mastication, insalivation, stomach and intestinal digestion, absorption, circulation and assimilation.

6. *Give a concise description of the stomach.*

See text-book.

7. *State clearly the differences between venous and arterial blood.*

Venous blood contains some oxygen and much carbon dioxide. Arterial blood contains more oxygen and less carbon dioxide than venous blood.

[The student must guard himself against the idea that arterial blood contains no carbon dioxide, and venous blood no oxygen. In passing through the lungs venous blood loses only a part of its carbon dioxide, and arterial blood in passing through the tissues, loses only a part of its oxygen. In blood, however venous, there is in health always some oxygen; and in even the brightest arterial blood there is actually more carbon dioxide than oxygen.—*T. H. Huxley.*]

8. *How may the teacher show that the products of respiration are the same as those of combustion?*

Place one end of a rubber tube in a bottle of clear lime-water, and breathe slowly through the other end. Observe that the clear lime-water becomes milky white. This is due to the carbon dioxide of the breath uniting with the lime to form carbonate of lime, which gives the milky precipitate.

Allow a bit of candle to burn for a minute or two in the bottom of a clean jar. Then remove it, pour in a little lime-water, place the hand over the top of the jar, and shake vigorously for a minute. The clear lime-water becomes milky, showing that one product of combustion is the same as one product of breathing.

The film produced by blowing the breath on the window, is the water vapor of the breath condensed by the cold glass.

The film which is seen when we first light a lamp, is the water vapor, produced by the flame, condensed on the cold chimney.

#### SCIENCE OF EDUCATION.

(Any five.)

1. *How early in life do children as a rule manifest the emotions of fear, anger, surprise, astonishment, and curiosity?*

Fear and anger are frequently manifested by children a year old, and by some children as early as the eighth month. Surprise, astonishment and curiosity are all manifested before the end of the second year.

2. *What is meant by esthetic feelings?*

The esthetic feelings are those which enable us to appreciate the beautiful in nature and art.

3. *How early in life do children manifest esthetic feelings?*

Toward the close of the first year as is evidenced by the babe grasping for the moon.

4. *Love, sympathy, jealousy, etc., show themselves how early?*

Love and jealousy accompany one another as early as the second year. Sympathy comes later when the child has had experiences similar to those which arouse its sympathy—seldom earlier than the beginning of the third year.

5. *What is the character of the child's power of attention?*

The child's power of voluntary attention is weak. Often, however, in

play he will unconsciously give his attention for several minutes to something which interests him.

6. *Define involuntary attention.*

The young child's power of attention is involuntary. It is startled into an attentive attitude of mind by some call or unexpected occurrence. In these instances the consciously active will is either wanting or used in only a slight degree.

7. *Define voluntary attention.*

Voluntary attention is the active self-direction of the mind toward any object external or internal.

U. S. HISTORY.

1. *In what respects did the three forms of colonial government differ?*

The charter colonies had charters from the king, written documents which gave the colonists the power to elect their own officers and govern themselves. The proprietary colonies also had charters, like the charter colonies, but they were given to the colonists by hereditary proprietors, who appointed the governors. The royal colonies had no charters and their governors were appointed by the king. The charter or republican colonies were Rhode Island and Connecticut. The proprietary colonies were Maryland, Pennsylvania and Delaware. The royal colonies were Georgia, North Carolina, South Carolina, Virginia, New Jersey, New York, Massachusetts and New Hampshire. Massachusetts is by some classed as a semi-royal colony.

2. *How does our present form of government differ from that in force during the Revolutionary War?*

Among the sovereign powers of a government, the power of taxation is the fundamental one upon which all others depend; and the fundamental weakness of the Continental Congress as well as its principal difference from the government of to-day lay in the fact that it could not tax the people.

3. *What was the Lewis and Clarke expedition, and in what ways valuable to the country?*

The Oregon country, covering the present states of Oregon, Idaho, and Washington was entirely unexplored until 1804. President Jefferson sent a land expedition under Lewis and Clarke which explored the upper Missouri River, and the country around the Columbia River, to the Pacific ocean. This afterwards gave the United States a claim to this country when the question arose as to its ownership.

4. *Give a short account of the great money panics experienced in this country.*

The panic of 1837 was due to speculation in western lands, the sales of which in twenty-six months amounted to \$41,000,000. The sales for the previous forty years had amounted to but \$49,000,000. This speculative fever had been aided by the deposit of government funds in state banks. The specie circular of the government requiring payments for lands to be made in gold, caused many of these banks to suspend and the crisis was precipitated.

A financial panic occurred in 1857 brought on in part by too rapid building of railroads in places where they did not pay. Railroads had been built in parts of the country where there were but few inhabitants, but where it was hoped that the railroads would bring settlers. The settlers did not come rapidly and the railroads did not pay expenses. Men who needed the money which they had put into the railroads began to offer their shares at lower prices. As prices fell, others became frightened and tried to sell; and, just as in 1837, a panic began.

The crisis of 1873 was due principally to excessive railroad building. In New York the panic was so great that the Stock Exchange was for twelve days closed. The banks suspended currency payments, but after forty days they again resumed.

5. *Compare the advancement of the rights of citizenship in the United States secured by war and by arbitration.*

The rights secured by war have been independence, freedom from impressment, freedom from right of search and freedom from slavery. All these affect personal liberty in the light of citizenship.

The rights secured by arbitration are those regarding boundaries, and indemnities for spoliations. These affect citizenship only indirectly.

6. *Name three prominent statesmen of the country—the first prior to 1820, the second from 1820 to 1860, the third from 1860 to the present time—and give some account of the work of each one.*

Washington's chief work was in defending his country from foreign enemies in time of war, and in keeping it free from entangling alliances in time of peace.

Jackson is noted for his introduction of the Spoils System, his destruction of the U. S. Bank, and his attitude toward nullification.

Blaine was conspicuous in Congress on account of his resolute advocacy of the protective system, and as Secretary of State in putting into effect the idea of reciprocity in our own trade relations with foreign nations.

7. *Describe the controversy growing out of the presidential election of 1876.*

The presidential election of 1876 was thrown into complete confusion by the state of affairs at the South. When the election by the people was over, it was found that, outside of Florida and Louisiana, each party had obtained nearly the same number of electors, and that both parties claimed to have carried the two deciding states, Florida and Louisiana. There were other points of dispute, but these two states were the most important. The reconstructed governments, on account of violence in their states, had usually appointed "returning boards," of about five men, whose duty was to examine the vote of the state, and throw out the votes of any counties or parts of counties in which voters had been kept away from the polls by terror or violence. In Florida and Louisiana, the Democrats had a majority of the votes cast; the Republicans had a majority after the returning boards had thrown out the votes of those counties which they decided against. The Democrats protested that this was illegal, as it made the returning boards masters of the election; the Republicans defended it, as any other



arrangement would make force and fraud masters of the election. Congress argued the matter until it was found that no agreement could be reached by the two Houses, and then the moderate men of both parties united in passing a special law to create an Electoral Commission. This commission was to be composed of fifteen members, five of them judges of the Supreme Court, five Senators, and five Representatives. The commissioners were to consider the disputed points, and to decide what seemed to them the true votes. Their decision was to hold good unless the two Houses should agree to over-rule it, and every one knew that the two Houses could not agree in anything. The decision was, therefore, really with the commission. It had been intended that seven of the commissioners should be Republicans, seven Democrats, and a fifteenth one who should not be an adherent of either party. The fifteenth member was unable to serve, and a Republican took his place. It was then found that on disputed questions the seven Democrats and the eight Republicans voted unitedly, so that all the important points were decided in favor of the Republicans by steady votes of eight to seven. The Houses did not agree in changing any of the commission's decisions; and R. B. Hayes became president, and W. A. Wheeler, vice-president.

8. *Name four conditions out of which the greatness of this country has come.*

The territorial extent, the favorable climate, the republican form of government, and the variety and extent of natural resources.

#### READING.

(Ans. No. 7 and five others.)

1. *Unify all the truths mirrored in the imagery of "The Vision of Sir Launfal," and show the relation of each to the unified product.* 10%

2. *Show how the imagery is organized to give free manifestation to the theme.* 10%

1 and 2. See the comment, pages 69-86, Literary Interpretations.

3. *What other poem is similar to "The Vision of Sir Launfal?" By whom written?* 10%

The Holy Grail, by Alfred Tennyson.

4. *Compare this poem with "The Vision of Sir Launfal."* 10%

The two poems are so different that a better idea of their likeness and differences can be obtained by reading them than by reading any labored attempt at a systematic comparison.

5. *Give a brief analysis of the poem.* 10%  
See the poem.

6. *Point out the literary qualities of the language.* 10%

"Pure, simple, correct, polished, elegant, ornate; his method which is not that of the most inspired periods, is essentially descriptive—idyllic. He delights in minutely finished pictures, felicities of expression, and subtle harmonies of sound. His verse is more remarkable for finish than for fervor. In technical execution, he has but few equals. In the mastery of language, few have been so highly favored. He affords samples of English which, for strength and beauty can hardly be rivalled."

7. *Read a selection to the County Superintendent.*

50%

## GUIZOT'S HISTORY OF CIVILIZATION.

(Any Ave.)

1. *Show that force is not essential to government.*

"The essence of government then by no means resides in compulsion, in the exercise of brute force; it consists more especially of a system of means and powers, conceived for the purpose of discovering upon all occasions what is best to be done; for the purpose of discovering the truth which by right ought to govern society, for the purpose of persuading all men to acknowledge this truth, to adopt and respect it willingly and freely." See pages 131, 132.

2. *Explain:*(a) *How the clergy is not a caste.*(b) *How the church chose those who should exercise power.*

(a) "The idea of hereditary right is inherent to the idea of caste. In every part of the world, in every country in which the system of caste has prevailed—in Egypt, in India—from the earliest time to the present day—you will find that castes have been everywhere essentially hereditary; they are, in fact, the transmission of the same rank and condition, of the same power, from father to son. Now, where there is no inheritance there is no caste, but a corporation. The esprit de corps, or that certain degree of love and interest which every individual of an order feels toward it as a whole, as well as towards all its members, has its inconveniences, but differs very essentially from the spirit of caste. The celibacy of the clergy of itself renders the application of this term to the Christian church altogether improper." See pages 134, 135.

(b) "You may here clearly observe, then, the two principles, the choice of the inferior by the superior, and the election of the superior by the subordinates; which were admitted and acted upon in the church, particularly at the period which now engages our attention. It was by one of these two means that men were appointed to the various offices in the church, or obtained any position of ecclesiastical authority." See pages 136, 137.

3. *Was individual reason suppressed in the church?*

(a) "Individual reason has always continued to exist and under whatever name it may have been disguised, has always considered and reflected upon the ideas which have been attempted to be forced upon it." See pages 139, 140.

4. *What favored the encroachment of the spiritual power over the temporal?*

(a) "When there exists, as there did in the tenth century, a government of the spiritual order; when the human thought and conscience are subject to certain laws, to certain institutions, to certain authorities, which have arrogated to themselves the right to govern, to constrain them; in short, when spiritual authority is established, when it has effectively taken possession, in the name of right and power, of the human reason and conscience, it is natural that it should go on to assume a domination over the

temporal order; that it should argue: "What! Have I a right, have I an authority over that which is most elevated, most independent in man—over his thoughts, over his interior will, over his conscience; and have I not a right over his exterior, his temporal and material interests? Am I the interpreter of divine justice and truth, and yet not able to regulate the affairs of this world according to justice and truth?" See pages 148, 149.

5. *What was the influence of the separation of the governors from the governed in the church?*

(a) See pages 156, 157, 158.

6. *What did the church do for the advancement of the individual:*

(a) *In the laity?*

(b) *In the clergy?*

(a) "I do not believe, however, that for individual man—for the drawing forth or advancement of his capacities—the church did much, especially for the laity, during this period. What she did in this way was confined to the bosom of her own society. For the development of the clergy, for the instruction of the priesthood, she was anxiously alive; to promote this she had her schools, her colleges, and all other institutions which the deplorable state of society would permit." See pages 161, 162.

7. *How did the church benefit society:*

(a) *As to slavery?*

(b) *As to civil and criminal legislation?*

(c) *As to the penitentiary system?*

(d) *As to war?*

(a) "She combated with much perseverance and pertinacity the great vices of the social condition, particularly slavery." See pages 162, 163.

(b) "The church labored no less worthily for the improvement of civil and criminal legislation." See pages 163, 164, 165.

(c) "There is another circumstance connected with the institutions of the church which has not, in general, been so much noticed as it deserves. I allude to its penitential system, which is the more interesting in the present day because, so far as the principles and applications of moral law are concerned, it is almost completely in unison with the notions of modern philosophy." See page 167.

(d) "Finally, she endeavored by every means in her power to suppress the frequent recourse which at this period was had to violence and the continual wars to which society was so prone." See page 168.

8. *"The spirit of the priest and of the temporal baron struggled within for the mastery." Explain.*

(a) "Now began a struggle, in the situation of the clergy, such as had scarcely ever before been seen; it was the struggle of the feelings and interest of the possessor of the fief, with the feelings and interest of the priest." See pages 178, 180.

9. *What was the influence of the church on the intellectual development of the church?*

(a) "The first is, that the church has exercised a vast and important in-

fluence upon the moral and intellectual order of Europe; upon the notions, sentiments and manners of society. This fact is evident; the intellectual and moral progress of Europe has been essentially theological. Look at its history from the fifth to the sixteenth century, and you will find throughout that theology has possessed and directed the human mind; every idea is impressed with theology; every question that has been started, whether philosophical, political, or historical, has been considered from a religious point of view. So powerful, indeed, has been the authority of the church in matters of intellect, that even the mathematical and physical sciences have been obliged to submit to its doctrines. The spirit of theology has been, as it were, the blood which has circulated in the veins of the European world down to the time of Bacon and Descartes. Bacon in England, and Descartes in France, were the first who carried the human mind out of the pale of theology. We shall find the same fact hold if we travel through the regions of literature; the habits, the sentiments, the language of theology there show themselves at every step."

#### GRAMMAR.

1. *Divide sentences into classes on basis of meaning and on basis of form. Give an example of each class. Why do we have these kinds on these bases?*

On basis of meaning, sentences are declarative, imperative, interrogative, and exclamatory. Fundamentally, each produces a certain effect upon the mind. (See text-book for examples.)

2. *Compare and contrast the noun and the pronoun as to their uses in the sentence. Illustrate.*

The noun or the pronoun may each be used as (a) a *subject*; (b) as a *predicate nominative*; (c) as an *appositive nominative*; (d) as an *independent nominative*; (e) as a *direct object*; (f) as a *predicate object*; (g) as a *prepositional object*; (h) as an *appositive object*; (i) as a *passive object*; (j) as a *possessive modifier*.

Examples of the more difficult uses mentioned above are as follows:

(c) 1. Webster the *statesman*, was a great man.

2. Sam Jones, *he* to whom you wrote.

(d) 1. The *cars* having left, we departed.

2. *We* being ready, the party moved on.

(f) 1. They elected Brown *mayor* of the city.

2. They supposed her to be *me*.

(h) 1. He was below *him* in the class.

2. We received the books from *them*.

(i) 1. John was refused *admittance*.

2. To be refused *them* was unpleasant.

The noun may also be used as an *adverbial object*, as, "The boy is ten years old."

3. *Give the classes of co-ordinate connectives, and state what kind of relation each expresses. Illustrate in sentences.*

Co-ordinate connectives are divided into four classes, as follows: Copulative, adversative, alternative and illative. The relation is called:

(a) *Copulative*, if the clauses are of relative meaning, or if they express the same line of thought; as, "The rains descended and the winds blew."

(b) *Adversative*, if the clauses express thought in contrast, or in opposition; as, "Talent is something, but tact is everything."

(c) *Alternative*, if the clauses express thought to be considered separately, or alternatively; as, "A king must win or he must forfeit his crown forever."

(d) *Illative*, if the latter clause expresses a consequence or a conclusion, deduced or inferred from the preceding clause; as, "Wisdom is the principal thing; therefore get wisdom."

4. *What kinds of connective words join the adverbial clause to the word which it modifies? Illustrate in sentences.*

Conjunctive adverbs and subordinate conjunctions; as, (a) The tree will live *if* you plant it *as* I directed. (b) *When* they came to countries *where* the inhabitants were cowardly, they took possession of the land. (c) Regulus gladly gave up his life *that* he might save his country.

5. *The dial instituted a formal inquiry, when hands, wheels and weights protested their innocence.*

a. *State the principal elements of the thought expressed by the sentence. Give reasons.*

b. *State the principal parts of the sentence.*

c. *State the principal word in each part and give all its modifiers.*

This sentence presents no difficulty.

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### SOME GOOD BOOKS AND STORIES THAT EVERY PERSON SHOULD KNOW.

The following list of books was recommended by Miss Charity Dye in her institute work in Porter County. It is printed here by request of the teachers.

**Foundation books.**—J. Andrews, "Ten Boys on the Road from Long Ago to Now;" Beesly, "Stories from Rome;" Baldwin, "The Story of Siegfried;" "The Bible," its stories; its characters; its poetry; W. C. Bryant, (Tran.) "The Iliad," and "The Odyssey;" Bulfinch, "Age of Fable," "Age of Chivalry," and "Tales of Charlemagne;" A. H. Clough, (Tran.) "Plutarch's Lives;" J. Fiske, "History of the United States;" W. Greene, "History of England;" C. Kingsley, "The Greek Heroes;" H. W. Mabie, "Norse Stories;" Ragozin, "Stories of Chaldea."

**Pleasure-Giving Books.**—J. Barrie, "Margaret Ogilvie;" J. Burroughs, "Pepacton;" G. W. Curtis, "Prue and I;" H. H. Jackson, "Bits of Travel at Home;" C. Lamb, "Essays of Elia;" Ik. Marvel, (Donald G. Mitchell), "Reveries of a Bachelor," and "About Old Story-Tellers;" Roger de Coverly papers from the "Spectator;" H. D. Thoreau, "Walden;" C. D. Warner, "My Summer in a Garden."

**Short Stories.**—Hans Anderson, "The Ugly Duckling;" T. B. Aldrich, "Marjorie Daw;" Dr. Brown, "Rab and His Friends;" C. Dickens, "A Christmas Carol;" E. E. Hale, "A Man without a Country;" B. Harte, "Luck of Roaring Camp;" N. Hawthorne, "The Great Stone Face;" W. Irving, "Rip Van Winkle;" R. Kipling, "The Brush-Wood Boy;" C. Lamb, "Dream Children;" Ouida (De-la-Reme), "The Dog of Flanders;" E. A. Poe, "The Gold-Bug;" Tolstoi, "Master and Man;" C. D. Warner, "The Hunting of the Deer;" M. E. Wilkins, "The New England Nun," and "The Revolt of Mother."

## FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by Oct. 18. Be prompt. Write only on one side of your paper.]

### SOLUTION REQUESTED.

*[Solutions that are requested will always receive prompt attention.]*

PROBLEM 36 page 283, Complete Arithmetic, Indiana Series :

I wish to purchase a 5% bond, so as to make the investment yield me 7%; how much can I pay for the bond, including brokerage at  $\frac{1}{2}\%$ .—E. B., Bainbridge.

7% of his investment is to yield 5% ; that is, 7% of what he pays for \$100 bond is to yield 5\$. \$5 is 7% of what sum of money?  $5 \div .07 = 71\frac{1}{7}$  ; hence \$71 $\frac{1}{7}$  is the whole investment, for every \$100 bond.  $\frac{1}{2}\%$  of the face value of the bond (\$100) is brokerage ; this is  $\$ \frac{1}{2}$  ;  $\$71\frac{1}{7} - \$ \frac{1}{2} = \$70\frac{1}{2}$ .

[COMMENT :—The wording of the last part of the problem is bad. The meaning is : How much can I pay for the bond alone, brokerage being  $\frac{1}{2}\%$  ?]

### ANSWERS TO QUERIES.

QUERY 58. What fort was captured through a game of ball, in the early history of our country? What year?—L. F. KNIEFF, New Orleans, La.

Detroit was captured by the Indians during Pontiac's War, through a game of ball. See foot-note page 90 Barnes's History of the U. S.—W. T. GROVES, Warsaw.

Also answered by R. L. KELLY, Plainfield.

### CREDITS.

John C. Gregg, A. M., Brazil, 202, 203, 204, 205, 206 ; J. Howard Wagner, Clinton, 202, 204 ; J. D. French, Whiting, 203, 204, 205, 206 ; Joshua Hays, Springport, 206 ; Ethelbert Woodburn, Lochiel, 202, 203, 204, 205, 206 ; S. N. Welty, Nappanee, 202, 203, 205 ; Fred C. Hayes, Springport, 202, 203, 204, 205.

### PROBLEMS.

198. In a triangle ABC draw a line EF parallel to the base BC and cutting the sides AB and AC (or AB and AC produced) in E and F so that  $BE + CF = BC$  or  $BE - CF = BC$ .—"Chauvenet," chosen by J. C. GREGG, A. M., Brazil.

207. The sum of four numbers in geometrical progression is 15 ; the sum of their squares is 85. What are these numbers?—J. D. FRENCH, Whiting.

208. Find the value of x and y in the equations— $4(x + y) = 3xy$ , and  $x + y + x^2 + y^2 = 26$ .—ID.

209. From a cask of wine containing 100 gallons, 10 gallons are drawn, and the cask filled up with water; 10 gallons are again drawn, and the cask filled. This process is repeated until 100 gallons have been drawn from the cask. How much wine remains?

210. Find the values of  $x$  in the following equations:—

$$\frac{a+x+\sqrt{2ax+x^2}}{a+x-\sqrt{2ax+x^2}}=b; \frac{2x-3b}{x-2b}-\frac{3x}{x+2a}=\frac{a}{2(a-b)}; \frac{x+1}{\sqrt{x}}=\frac{c+1}{\sqrt{c}}.$$

—A READER, Knightstown.

211. A man desires to set out a rectangular orchard of 864 trees, so placed that the number of rows shall be to the number of trees in a row, as 3 to 2. If the trees are 7 yards apart, how much ground will the orchard occupy?

212. Determine the isosceles triangle in which the altitude is equal to one-third the whole perimeter.

213. An old-fashioned dash churn half full of milk is 28 inches tall. The diameters of the upper and lower ends, respectively, are 12 and 16 inches. What is the depth of the milk?—MARK MOFFETT, Rockport.

214. Describe a cyclic quadrilateral about a given circle.—J. C. GREGG, A. M., Brazil.

THAT STOVE PROBLEM AGAIN:—The answer to this problem in the August JOURNAL, page 561, is theoretically correct, and susceptible of proof, yet practically impossible. J. C. GREGG sends the following:

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
	6	$4\frac{1}{3}$	71	124	4	4	4 @ \$ 6 =	\$24	
10 $\frac{1}{3}$	7	$3\frac{1}{3}$	56	31	6	6	6 @ \$ 7 =	\$42	
	19	$8\frac{1}{3}$	124	71	14	$\frac{1}{3}$	5; 5 @ \$19 =	\$95	
									\$161

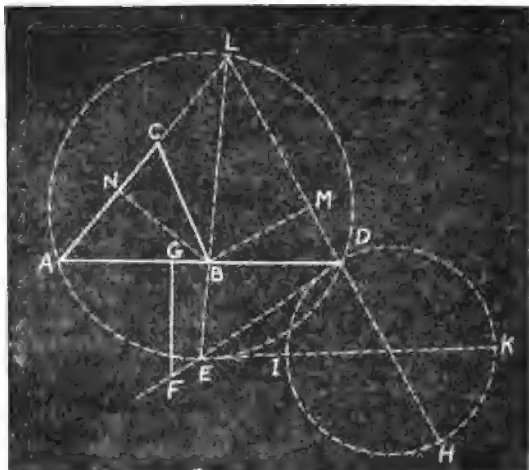
(d) and (e) are the balancing columns and their sums are 195 and 45. Either or both columns may be multiplied by any number, whole or fractional, which will give 15 stoves. It is evident that the multipliers here must be fractional, and to get integral results those fractions must be thirty-firsts. The question now is how many thirty-firsts of 195 with thirty-firsts of 45 will make 15; or how many whole 195's and 45's will make 31 times 15 or 465? Take one 195 from 465, and the remainder 270 is 6 times 45, and this is the only combination of 195 and 45 which will make 465; hence, multiplying column (d) by  $\frac{1}{31}$ , and column (e) by  $\frac{1}{31}$ , we get integral results, as seen above.

#### SOLUTIONS TO PROBLEMS.

PROBLEM 198. This problem was misprinted in the June issue. It will be found corrected in the new list for this month.

PROBLEM 199. Given an angle of a triangle, the sum of the sides about that angle, and the perpendicular from that angle to the opposite side, to construct the triangle.—"Phillips and Fisher," chosen by J. C. GREGG.

Solution by PROF. J. SCHEFFER, Hagerstown, Md.:



On AD the given sum of the two sides describe a segment ALD which will contain the given vertical angle. Bisect the arc AED at E, and in DE find a point F so that the perpendicular FG to AD will equal the given altitude. Draw DH perpendicular to DE and equal to DF, and on it as diameter draw the circle IDK. DE will be tangent. Take  $EB = EI$  and draw EBL. Join LA and LD and draw BM and BN perpendicular to LD and LA. The triangles LED and BED are similar and  $LE : ED :: ED : EB$ . Therefore  $LE \times EB = ED^2$  ..... (1). Also since ED is tangent  $EK \times EI = ED^2$  ..... (2, and, since  $EB = EI$  in (1) and (2),  $EL = EK$  and  $BL = IK = DF$ , and the right triangles DGF, LBN and LBM are equal, and  $BN = BM$  = the given altitude. Now take  $BC = BD$  and the triangles BNC and BMD are equal and angle NBC = angle DBM, and angle ABC = angle ABN + angle DBM = the supplement of angle NBM = angle ALD = the given vertical angle, and  $AB + BC = AD$ , and ABC is the required triangle..

PROBLEM 200. The Great Northern Express leaves London at 8:30 P. M. and reaches Edinburgh (399 miles) at 6 A. M. At what distance from London, and at what time would it be met by a train leaving Edinburgh at 10:20 P. M., and traveling  $38\frac{1}{2}$  miles an hour?

Solution by W. F. HEADLEY, Bloomington :

The Great Northern Express travels  $1\frac{1}{2}$  hours, or  $1\frac{1}{2} \times 42 = 77$  miles, before the Edinburgh train starts. In four hours from the starting of the Edinburgh train, the G. N. E. has traveled  $168 + 77 = 245$  miles, and the Edinburgh train has traveled 154 miles.  $245 \text{ miles} + 154 \text{ miles} = 399 \text{ miles}$ , the whole distance. Hence the two trains would meet at 2:20 A. M., 245 miles from London.

PROBLEM 201. A's rate of working is to B's as  $\frac{1}{2}$  to  $\frac{1}{3}$ ; B's to C's as  $\frac{1}{4}$  to  $\frac{1}{5}$ ; C's to D's as  $\frac{1}{6}$  to  $\frac{1}{7}$ ; how long would they all together take to do a piece of work which A can do in 930 hours?



Solution by J. C. GREGG, Brazil :

By the conditions of the problem B can do  $\frac{2}{3}$  as much as A, and C  $\frac{1}{3}$  as much as A, and D  $\frac{1}{6}$  as much as A. Hence A, B, C and D can do  $\frac{3}{2}$  as much as A. Therefore it will take them  $\frac{2}{3}$  as long as A to do the whole work.  $\frac{2}{3}$  of 930 hrs = 350 hrs.

PROBLEM 202. A drover bought 100 head of sheep and calves for \$387, paying \$4.50 per head for the sheep. Had the number of sheep and calves been interchanged, they would have cost \$413. How many sheep and calves respectively?—THOMAS JONES, Sulphur Springs.

Solution by J. D. FRENCH, Whiting :

Let  $x$  = number of sheep;  $100 - x$  = number of calves;  $\frac{9x}{2}$  = cost of

sheep;  $\frac{387 - \frac{9x}{2}}{100 - x}$  = cost of one calf;  $\left( \frac{387 - \frac{9x}{2}}{100 - x} \right) x + \frac{1}{3}(100 - x) = 413$ ; solving,  $x = 37$ , the number of sheep;  $100 - x = 63$ , the number of calves.

Solution by S. N. WELTY, Nappanee, Ind :

Let  $x$  = number of sheep bought;  $y$  = the number of calves bought, and  $z$  = the cost of each calf.

$$\begin{cases} \text{Then } x + y = 100 \\ 4\frac{1}{2}x + yz = 387 \\ xz + 4\frac{1}{2}y = 413 \end{cases}$$

from which  $x = 37$  and  $y = 63$

J. C. GREGG sends a solution by *alligation*.

PROBLEM 203. A grocer fixed his price on tea so as to gain 20%; but after selling  $\frac{2}{3}$  of it he was forced to reduce his price 10 cents per pound, and so gained only  $14\frac{2}{3}\%$  on the whole. What was the cost per pound?—ID.

Solution by F. C. HAYES, Springport High School:

Let  $x$  = cost per lb.;  $\frac{6x}{5}$  = the proposed selling price;  $\left( \frac{6x}{5} - 10 \right)$  = the reduced selling price;  $\frac{18x}{25}$  = amt. received for  $\frac{2}{3}$  of it;  $\left( \frac{12x}{25} - 4 \right)$  = amt. received for  $\frac{1}{3}$  of it;  $\frac{30x}{25} - 4$  = amt. rec'd per lb.;  $\left( \frac{x}{5} - 4 \right)$  = gain per lb.;  $14\frac{2}{3}\% = \frac{x}{5} - 4$ ;  $100\% = \frac{300x - 6000}{220}$ ; hence,  $x = \frac{300x - 6000}{220} = 75$ ; hence, the price was 75 cents per pound.

PROBLEM 204. In a certain race, A can beat B by 80 yards; but if A runs at  $\frac{2}{3}$  of his usual speed, and B at  $\frac{1}{3}$  of his, A beats B by only 26 yards. Find the length of the race.—ID.

Solution by J. HOWARD WAGNER, Clinton High School :

Let  $x$  = length of race;  $y$  = time of first race; then  $\frac{x}{y}$  = A's rate in first race;  $\frac{x - 80}{y}$  = B's rate in first race;  $\frac{8x}{9y}$  = A's rate in second race;  $\frac{9x - 720}{10y}$  = B's rate in second race;  $\frac{x}{9y}$  = time it takes A to complete second

race;  $\frac{x-26}{9x-720} = \text{time it takes B to complete second race}; \frac{x}{8y} = \frac{x-26}{9x-720};$   
 $\frac{10y}{9y}$   
 solving,  $x = 4400$  yds.

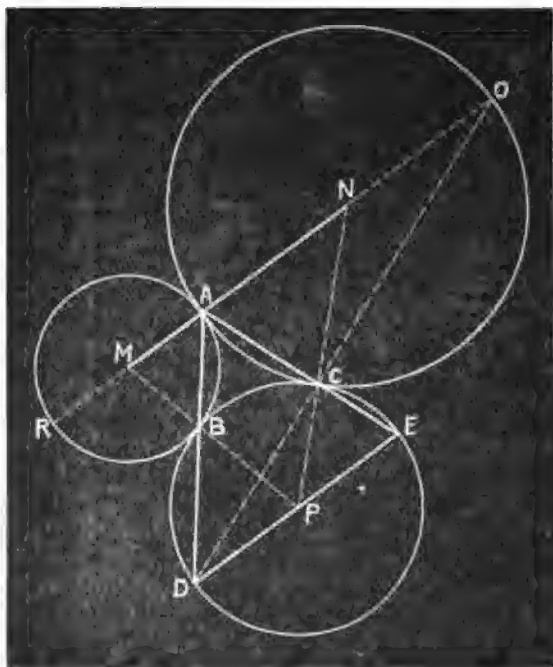
**PROBLEM 205.** A farm rents for \$300 in money and a certain number of bushels of wheat. When wheat is 80 cents a bushel, the rent is  $12\frac{1}{2}\%$  less than when it is \$1.20 per bushel. Find the number of bushels of wheat.—ID.

Solution by S. H. WELTY, Nappanee :

Let  $x$  = the number of bushels; we immediately obtain the following equation  $\frac{300 + .80x}{87\frac{1}{2}} = \frac{300 + 1.20x}{100}$ ; solving,  $x = 150$ .

**PROBLEM 206.** Three circles touch each other externally at A, B, and C; the chords AB, AC, of two of them are produced to meet the third again in the points D and E; prove that DE is a diameter of the third circle, and parallel to the line joining the centers of the others.

Solution by ETHELBERT WOODBURN, Lochiel :



Let M, N and P be the given circles touching each other externally at A, B and C. Let the chords AB and AC be produced to D and E and let MN be the line joining the centers of the other circles. To prove DE the diameter of circle P and parallel to MN. MN joining centers of two tangent

circle passes through point of tangency A, MP passes through B, and NP through C. Produce MN each way to R and O. Join O and C, C and D. Angle  $AOC = \frac{1}{2} \text{ ANC}$  .....(1);  $CDB = \frac{1}{2} \text{ BPC}$  .....(2);  $NAB = 2 \text{ rt. angles} - MAB$ ;  $MAB = \frac{1}{2} \text{ RMB}$ ;  $RMB = \text{ANC} + \text{BPC}$ ;  $MAB = \frac{1}{2} \text{ ANC} + \frac{1}{2} \text{ BPC}$ ;  $NAB = 2 \text{ rt. angles} - \frac{1}{2} \text{ ANC} - \frac{1}{2} \text{ BPC}$  .....(3). Adding (1), (2) and (3),  $AOC + CDB + NAB = 2 \text{ rt. angles}$ . Therefore, OCD is a straight line, and since ACO is a right angle DCE is a rt. angle and is inscribed in a semi-circle. Therefore DE is the diameter of circle P. Triangles PCE and ACN are isosceles. Therefore  $CEP = ECP = NCA = NAC$ . If  $CEP = NAC$ , DE is parallel to MN.

Neat geometrical solutions were also received from J. C. GREGG, JOSHUA HAYS and J. D. FRENCH.

## TOWNSHIP INSTITUTE OUTLINES.

### PLATO THE TEACHER.

#### PHAEDRUS.

The real theme of the *Phaedrus* is love as an active principle, or true and false love. Incidentally, in discoursing upon the main topic, Plato satirizes the rhetoricians who, as a class, give more thought to the form of discourse than to the finding of truth. The result is that they acquire the power to "make the worse appear the better reason," and so mislead the minds of the eager youth who are dazzled by the glitter of their rhetoric. This is clearly shown in the case of Phaedrus himself, who has accepted the false, but showy reasoning of Lysias, concerning love.

Love, when viewed truly, is found to be a divine possession, or ecstasy, which leads the soul to desire the highest, or absolute truth, beauty, and goodness. The soul that is possessed by this pure love cannot rest satisfied until it has itself produced something of beauty, either in itself or in others.

This divine madness finds expression in four ways: First, in prophecy; secondly, in religious ecstasy; thirdly, in poetry; fourthly, in love, or aspiration.

Under the figure of a wing, Socrates presents his theory concerning the immortality of the soul. The soul that, through strong desire, has attained to a vision of absolute truth, rises in the scale of being. To every soul is given a body suited to its stage of development; but this is a new probation, and upon its use of each fresh opportunity, will depend what body, of animal or man, shall receive the soul in its next migration. What one loves determines his condition; hence love is the motive principle, and in its highest attainment, lifts the soul into unity with God. (See Lowell's poem "Longing.")

In the "Inferno," Dante has pictured the effects of sin upon the soul which persists in evil. The "Purgatoria" represents the soul in process of purification from the seven deadly sins which are all seen to be disorders of misdirected love.

The Hindoos believe in constantly repeated reincarnations of the soul. Whenever a body dies, the released spirit enters the body of a newly born infant or, if the former life has been bestial, of some lower animal. The soul that in its successive incarnations becomes more and more purified, will, after indefinite periods of time, be absorbed in the one great spirit.

Adaptation of the teaching to the individual child is a cardinal principle in modern pedagogy.

Love of good is the highest principle; man can rise to higher levels of thought and action only through this divine love.

In reading the *Phaedrus*, the teacher discovers that some of the most prominent of the practical pedagogical lessons of the *Apology* are re-emphasized. In this conversation between Socrates and the youth, Phaedrus, we find an example of perfect art in teaching.

In the first place, we are impressed with the absolute freedom of expression on the part of the young man. The teacher who would win the child must establish a unity of feeling between himself and his pupils. It is a mistake to suppose that, in order to gain the respect of children, the teacher must seem to them all-knowing and infallible; school children know very well that the teacher is a being of limited knowledge, and their confidence is best secured by showing them, as Socrates did, that he is himself a seeker after further truth.

To say frankly, "I do not know," is far better than to pretend to knowledge which the pupils are quick to discover that the teacher does not possess. Absolute sincerity, as Plato so plainly shows, is the essential quality of character. The teacher who makes his pupils feel this high nobility in himself is far less likely to find them attempting to deceive him; for "like begets like" is a principle that holds in the schoolroom, as well as in the outside world.

The second inference that I would make from the *Phaedrus* is akin to the first; namely, that enthusiasm—real desire to learn—must make itself felt in the teacher, if he would arouse the interest of the pupils, and hold their attention; without which no teaching, in the true sense of the word, is possible. To attain this end, it is essential for the teacher to put himself by sympathetic imagination into the minds of those whom he is attempting to teach; for his ability to adapt himself to his pupils will depend upon this understanding of their minds; and adaptation is essential to successful teaching. The *Phaedrus* shows how this interest may be excited and drawn on. Socrates is careful, in the first place, to show himself interested in that which interests the young man; he does not chill the youth's ardor by denouncing Lysias or his doctrines which have so fascinated Phaedrus, but with wonderful art leads him to see for himself their real fallacy. Then, he does not give the young man all that is in his own mind at once, but stimulates his interest by giving him successive glimpses of the truth to which he would lead him. He makes his teaching attractive by using figures and the story form, thus through his imagination teaching him the highest truths.

"The followers of every god seek a love who is to be like their god, and when they have found him, they themselves imitate their god, and persuade their love to do the same." The natural impulse is to desire to imitate

whatever one admires. Since success is largely conditioned upon gaining the pupil's loving respect, the teacher must seek to present to them examples of lives worthy of imitation, and be himself, as far as possible, a living illustration of such true nobility of character.

#### THE REPUBLIC.

"Concerning Justice," another title which is sometimes given to this dialogue, reveals its true theme. Justice, or the law of right living, is the question which Socrates is now considering.

A modern writer says: "Money means power to be honest, power to be just, power to be merciful." Cephalus evidently held a similar view, and regarded the power to deal justly with other men in the matter of paying his debts and of telling the truth as the greatest benefits that he had derived from the possession of wealth.

Justice involves honesty, truth and regard for the welfare of others. It is the perfect balance or harmony of the other virtues—courage, wisdom, temperance. It has its seat in the reason. LOIS G. HUFFORD.

#### NOTES ON "LANGUAGE ARTS."

It is important that every day after the pupil has a sufficient command of the symbols of written expression he should be led to write his thoughts upon some subject with which he has become familiar. Nothing can be made a requisite substitute for the exercise in constructive work in composition. Many exercises may be made to contribute to the pupil's growth in the power of expression, but frequent attempts to put into clear, simple form the thoughts he himself has really *thought* are necessary to anything worthy the name of good work in English composition. The point of most vital concern is that the boys and girls be so directed that they come to scorn anything in the way of pretense, that they come to appreciate at its real value the art of clearly and simply expressing their own thought. If the pupil be encouraged to write of his own experience, his own feelings, his own observations, his own life, he will be saved from that abnormal condition wherein he is likely to fall to moralizing upon some of the problems of life remote from his experience and hence seen only through the eyes of others. If these problems of life suggest themselves to the immature boy or girl, as they may, let the solution offered be the boy's own, the girl's own, and not one repeated from some sage philosopher or moralizer. The child permitted to do second hand work is being educated in untruthfulness. Teachers should feel themselves responsible not only for the bad English thus fostered but also for the immorality thus practiced.

The greater good that may come to the child through the reading work of the school is the equipment in the way of taste which he may realize. Too much emphasis cannot be placed upon the first requisite for reading mentioned by Dr. Hinsdale, viz.: "He must have a mental preparation—intellectual, emotional and volitional—such as will enable him to receive the knowledge, feeling and purpose with which the composition that he reads is charged." There are various sources from which this equipment may

come—the story, the myth, the nature study. If these have been used in such a way as to heighten the child's realization of the spiritual significance of truth, he will come to books looking for the higher view of all things, and books will reveal to him more of what he already feels and knows.

The reading work is done only in part if there be no definite provision for much reading to be done by the pupil outside of the school subject to wise guidance. The poet has not given his whole message unless he frees the child from the trammels of the set task and takes him out into the beautiful free world of nature and human life. If there be anything of an approach to an ideal the child will be led by every piece of literature taught him in school to seek for himself, and by himself, for the good things in many more books, and better still he will find new truths in the fields and words and people about him.

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### NOTES ON MUSIC.

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Rote singing is the ability to sing some familiar air or song, without having any knowledge of the theory of music.

The principal reasons for teaching rote singing in school are ; it cultivates the sense of hearing ; it creates a liking for the art ; it demands close attention on the part of the pupils which tends to train the power of observation and strengthen the memory. It is a recreation and a pleasure. Rote singing may however be carried too far. If the children are permitted to sing too often by rote, it may cause them to form a dislike for the study of written music. The teacher should be very careful in rote singing to see that every child sings the correct melody for there is a tendency in children to form their own opinion concerning the melody.

School songs should be songs which express delight or happy thoughts accompanied by a pleasing and sparkling melody. Words overflowing with thoughts of the everyday life of the child ; songs of the seasons *in season* ; patriotic songs ; (for these inculcate in the young, susceptible heart patriotism and good citizenship) ; songs for special occasions, as Arbor day, Thanksgiving day, etc., are proper songs for school children. Before teaching songs for these special occasions explain to them something of the day.

In presenting a new song first study the phrasing very slowly and carefully, and see that the rhythm is correct before taking the words ; then teach the poem as you would a reading lesson.

Music has two elements ; an outer or technical, where trained intelligence rules, and teaching and study are the principal means of progress ; and an inner element dwelling in the imagination and musical feeling which can be strengthened by judicious experience in hearing.

Music is the divinest of all arts, the most important in a high sense of all studies. No art has held such personal connection with every human emotion as music, and, therefore it has the speaking force of personality—in this lies its great strength.

Greenfield.

J. E. MACK.

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"METHOD IN ARITHMETIC."

The "Institute Outline" for this subject is chiefly suggestive.

It has two phases: one presents a general scheme for arithmetic as a whole; the other is a particular plan for teaching the terms of a fraction.

These are intended to hint the general questions the teacher must answer in preparing for any topic in number study. This paper is intended to blend more fully in detail these two phases.

The teaching process, according to Tompkins, has two phases. One is the movement of the teacher the other is that of the pupil. The teacher sees the pupil's need and purposes to relieve it. Hence he passes from his purpose through his subject matter to his means of realizing his purpose,—his devices which embody his subject-matter.

The pupil is not conscious of his need as such. He is concerned with his own experiences and presses forward to make them as full of pleasure as possible. Hence he must pass from means through subject-matter to the realization of the end set up by the teacher. From purpose to device is the teacher's pathway; from device to effect is the pupil's. These two are parallel but opposite in direction.

The teacher must be conscious of both, ideally in preparation, really in presentation; the pupil is conscious only of the thing itself as a means of gratifying himself.

If the teacher gives most attention to the means, the devices, the ways of doing things, he is emphasizing external method. If he is chiefly concerned with the steps in the child's thinking and their order and interdependence, then he is emphasizing internal method.

If he watches both and measures their mutual relations, he is emphasizing method, complete method, thought and expression in an effort to become one.

The teacher should always have in mind both these phases of the teaching act and both views of true method. In preparing himself to teach any topic in arithmetic, the teacher must answer the several questions intimated in the general outline.

They may not come to him in the order there suggested; but when organized into a working plan they must show a logical interdependence.

He will first answer—What is this topic I am to teach?

In general—What is Arithmetic?

In particular—What is a fraction?

Still further—What are the terms of a fraction? if the last be his topic, as set forth in the "outline for the fourth year." This is assumed.

An answer to the last question, is given in the "outline" under the heads (1) meaning of the numerator and (2) meaning of the denominator.

He knows definitely the goal for which he starts.

At this point he must answer a second question—What purpose have I in teaching this subject-matter? What effect may I expect as a result of the pupil's co-operation with me?

Answered in terms of the child's experiences, he will know the meaning of the numerator and the denominator in their separateness and in their unity, the universal functions of these terms.

He will respond emotionally to this new knowledge, so that a new satisfaction is his, a new sense of mastery of things external, a new "swelling of the heart" which prepares for wider and deeper experiences.

He will be possessed by new impulses toward numbers and will voluntarily use his energies in trying to discover truths to him unknown. When his choice is affected and his activity thus directed, "virtue has gone out" of the teacher and has become a helpful element in the child.

But the teacher is not through with these questions. He must know the necessary movements in the child mind as this matter is learned. The child mind moves by regular steps, and these are asked for.

He must have in consciousness the fact or truth from which to advance. In this case, it is a particular common fraction, the numerator and its function, the denominator and its function, and their unity of function in the fraction.

He must repeat this particular process with other fractions, until the truth is fixed that every numerator does the same thing, that every denominator does another same thing and that the fraction is the result of these united doings. This is thinking the general from a series of individuals and results in a formal definition, which may be "home-made" but which will surely be understood.

Again with the teacher: He seeks for the basis for this procedure, the point of departure in learning this new matter.

In every learning act the child must start from where he is, from some knowledge already possessed, a closely related mental activity already performed. This truth is not always regarded, perhaps not always inquired for.

In the lesson cited, the child's beginning is in his previous knowledge of fractions, learned in the study of number ideas.

The uses of fractions and of their terms have been concretely presented and the ideas have been learned, but no attempt has been made to formulate a definition for the fraction or for its terms. To do this is the end of the lesson in hand.

The child's general knowledge that all symbols stand for meaning is another basal element in this new process.

And yet again with the teacher: He wishes to know what devices he may use. To choose them well, involves a careful consideration of the whole situation. Many different things may serve his purpose, but not "anything" nor "everything" will. Sometimes a lesson loses power because of badly chosen means. They must at all events be stimulative of the movements in learning the subject-matter, and in no way a hindrance.

The teacher will find good in an assignment. This provides for desk work and will lead to thinking toward the end of the lesson..

For instance, it is well to ask the children to copy in figures some fractions expressed in words, and vice versa; also to write upon their slates what they think the figure above the line shows, and what the one below. These directions cause a rethinking of the uses to which the children have put the figures in previous exercises. It really asks for the general as embodied in a series of individuals.

In recitation the teacher will plan to call for the work assigned. The



reasons are obvious; but not a few teachers are careless in this matter, and thus cheapen their requirements with children. When these reports are made and errors corrected, the teacher is ready for the main thought of the hour. What are the functions of the numerator and denominator in a fraction?

By a series of questions, which he must pre-arrange, he will lead his pupils to see the uses of each in several fractions, and to make the general definition for the terms. These questions must be rightly chosen, must be stimulative of thought in the pupil, and so adjusted to his knowledge and his ignorance that he can take the mental step desired.

It seems to me that this is the most difficult part of the whole process. Good questioning will almost always secure good thinking.

The recitation will often present unexpected conditions, emergencies which will test the power, patience, and pluck of the teacher.

The careful planning of this general outline for the lesson, gives a basis from which to meet these incidental difficulties—a sort of anchorage in the mid-current of the topic.

The foregoing is an illustration of the teacher's preparation for any lesson in number. In this same subject of fractions, there are other lessons; as, reduction to higher and lower terms, and to common denominators, addition and other processes. A question of precedence among these topics will arise. The teacher must have an order for them and a good reason for that order.

The earnest teacher will sometimes do all these things and—fail. But he need not succumb to such failure. He must search for the cause and try again. He may have disregarded some minor condition, which disordered a well-considered plan. To correct such errors requires patient study and careful planning. A generation of teachers with these attributes will make thought-work in numbers far easier and immensely more valuable.

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## MISCELLANY.

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THE Johnson County high schools all have a four-year course. E. L. Hendricks is county superintendent.

THE Manual and Course of Study of the Middletown schools for 1897 is comprehensive, well arranged and suggestive. H. N. Coffman is superintendent.

THE Vories Business College of Indianapolis has recently issued a catalogue of artistic design. It gives information in regard to the school and can be had for the asking.

FRANK M. BEARD still continues to superintend the Hartford City schools. His recent course of study is based on that recommended by the State Superintendent's Association, and is good.

THE Indianapolis high school opened with over *nine hundred* students in attendance—the largest in the history of the school. Nearly one-fourth

the class that graduated last June returned to do post-graduate work. Geo. W. Hufford is principal.

GREENCASTLE has changed its high school course of study to four years instead of three years. This puts Greencastle in line with the best high schools of the State. R. A. Ogg is superintendent and Martha J. Ridpath is principal of the high school.

THE Course of Study of the Remington schools for 1897-8 is at hand and makes a good showing for this prosperous little city. W. R. Murphy is the superintendent. J. H. Johnston is the high school principal and there are six teachers in the grades.

THE REPORT of the Tipton schools for 1897-8 is on our table. It is unusually full and comprehensive. It contains not only cuts of buildings and grounds but also interior views of rooms. The superintendent, Frank L. Jones, never does things in a careless or indifferent way.

SHELBYVILLE sends out its Report and Course of Study for 1897, which includes everything a person needs to know in regard to the organization and general conduct of the schools. The suggestions to teachers by the superintendent are certainly good. J. H. Tomlin continues as superintendent.

PORTLAND made an enrollment of 947 pupils the first week of school—the largest in the history of the city. Eight of the Portland teachers spent a part of their vacation in attending summer schools for the improvement of teachers. Two teachers' clubs have been organized. Superintendent Hottel means business and progress.

THE Tri-State Normal at Angola has started off in good shape again. It has its advanced classes full. For example, there are *twenty-three* in the class reading Homer's "Iliad." This school is contemplating the putting forth of a little school paper. For all information in regard to the school, address the president, L. M. Sniff.

THE Brazil schools opened with over 1,400 pupils—the largest number in their history. The high school is especially full, the entering class numbering about 65. C. J. Hutchison has been added to the high school faculty. Owing to the extremely hot weather the schools were dismissed Sept. 14 for the remainder of the week. J. C. Gregg is serving his nineteenth year as superintendent.

THE University of Pennsylvania issues a series of monographs on important subjects that involve original research. The last issue is the first of a new series and is entitled, "Contributions to the Geometry of the Triangle;" and it is written by Prof. R. J. Aley, of Indiana University. The writer cannot judge of the value of this discussion, but the fact that this noted institution publishes it is an honor of which Professor Aley has reason to be proud.

THE Reading Circle Board has just sent a circular to county superintendents in which it says: "Some trustees seem to have the impression

that the decision of the Supreme Court prevents their buying Reading Circle books. While we do not believe that it does, at the same time we are anxious to have something done that will be the means of placing these excellent books in the hands of children. If the trustees *will not* buy them, will you not urge your teachers to raise the money by holding a good entertainment in each school?" It is then suggested that Arbor Day would be a good time at which to give the entertainment. The JOURNAL heartily endorses the suggestions. If the children and the people help to buy the books they will appreciate them more highly.

THE Central Normal College opened its 21st year with an attendance fully 100 larger than last year. The regular courses are full, some of them the largest in the history of the school. The regular faculty is in charge, and the prospects for a splendid year are excellent. Twelve states were represented by students the first day and sixty-five counties in Indiana were represented. Almost every county will have a representative before the year is passed. Fifteen of the county superintendents in Indiana have been students of the Central Normal. These facts cause the college to fit itself especially to meet the needs of Indiana teachers. The method and training work has been much strengthened for the present year. The college spares no effort to be worthy the patronage of the public. Catalogues and full information can be had by writing the president at Danville, Ind.

THE INDIANA UNIVERSITY has issued an eight page circular which gives a list of the books, papers and reviews published by the members of the faculty during the past year. The list is a long one, and is another indication that Indiana is doing her part in the advancement of educational and scientific thought. The circular will be sent to any one on application to the Registrar of the University. There has just been issued a circular enumerating the courses of University Extension lectures which will be given by the members of the faculty of Indiana University during the University year, 1897-8. The names of the lecturers, the subjects, and terms are given in the circular, which will be sent free on application. The University opened September 22 with a large attendance. The enrollment the first day was in excess of any previous first day. Every indication points to a most prosperous year. The faculty is stronger than ever before. Very few men leave and a large number who have been away on leave of absence have returned.

FULTON COUNTY, with W. W. Parsons, F. M. Stalker and Mrs. C. W. Boucher as instructors, had one of the most successful institutes ever held in the county. Four evening entertainments were given. W. S. Gibbons is county superintendent.

THE Adams County teachers' institute closed September 4 after a very successful week's work, under the direction of Superintendent Irwin Brandyberry. The regular instructors were Dr. U. G. Weatherly and Prof. L. O. Dale. Evening lectures by Dr. Weatherly, President Swain and Rev. Earle Wilfly. Average attendance daily, about 425; enrollment 167.

B. A. WINANS, Sec.

JAY COUNTY held a good institute this year with W. D. Weaver, of Marion, and Paul Monroe, of Morning Side Heights, New York City, as principal instructors. I. E. Neff, principal of the Portland high school, did some good work in science. Superintendent Weaver lectured on Tuesday evening on "The Witchery of Woman," and Prof. Monroe lectured Thursday evening on "An American Ideal." County Superintendent Lewis Crowe conducted the institute in a way to give general satisfaction.

STARK COUNTY held its institute Sept. 13-17, and was therefore the *ninetieth* since Aug. 2. The weather was exceedingly warm, but the attendance was good, and the interest was excellent. E. B. Bryan and L. O. Dale were the principal instructors. State Supt. Geeting, L. M. Sniff, H. B. Brown and W. A. Bell were each present at some time in the week and rendered acceptable assistance. Evening lectures were given by E. B. Bryan, L. O. Dale and L. M. Sniff. Monday evening was devoted to a "social," which was much enjoyed. W. A. Faust, the new superintendent, is making a good start and is well liked by the teachers.

THE Marion County teachers' institute has just closed a very successful session. W. F. Landes, the new county superintendent is capable and energetic and has the best wishes of the teachers. Professor Bergstrom, of Bloomington, gave instruction on "Educational Classics," child study, psychology and school hygiene. Professor McBeth, of Terre Haute, gave lessons on the new methods of teaching geography, history and literature. Professor Juergens gave instruction in music and Professor Moore, of Harvard gave two pleasant talks on the application of botany in the primary schools. The attendance during the entire week was excellent and a great deal of interest was manifested in all the work. SECRETARY.

THE Rush County institute began August 16. Mrs. Emma Mont McRae, of Purdue, had charge of the work in literature. The subject and the instructor are equal favorites with the Rush County teachers. The lectures of Dr. Stephenson, of DePauw, in which he traced ancient and modern civilization, were particularly fine. The teachers hold many pleasant memories of their convention, and hope to welcome both Mrs. McRae and the genial Doctor in future years. The institute adopted the following: "*Resolved*, That we favor such a reconstruction of the State Board of Education that non-state colleges and schools may be represented thereon." A. L. Gary is our new superintendent. MRS. MAY WELLMAN, Sec.

THE Porter County institute was held August 30 with an average attendance of 160. Prof. Sanford Bell, of the Northern Indiana Normal School, worked along the line of child-study and psychology. Professor Bell has the unique faculty of making scientific facts simple and practicable so they may be applied by any teacher. Miss Charity Dye, of Indianapolis, gave work along the line of literature. In her happy practical way she did the teachers much good. One feature of the institute was to have general discussions by the teachers during the morning sessions. This developed very many good points for every day school work. Dr. Chas. A. McMurry lectured on "Broad Tracks and Narrow Tracks in Education." Dr. Harrold

Johnston, of State University, read a very instructive paper on "The Teacher out of the Class Room." Our old friend, W. A. Bell, was welcomed by the institute. The schools of the county opened September 6 and will continue eight and one-half and nine months. Teachers are paid fair wages and are happy in their profession.

A. A. HUGHART, *Co. Supt.*

TIPPECANOE COUNTY teachers' institute was held September 6 to 10. The sessions were four and one-half hours each day, including two recesses of twenty minutes each. The principal instructor was Robt. J. Aley, of Bloomington. Mr. Aley is an instructor in the true sense, also entertaining and pleasing in his address and delivery. His work has given the teachers higher ideals of their work and duty. His plea for more formal work was well taken. Since the County Board has adopted music in all the schools, special instruction was given in this subject. T. J. Reese, of Richmond, had charge of the work in music. His work was well received. W. L. Parker, of our city, "the champion entertainer," assisted by his pupils, gave two piano recitals each day, closing with a musicale on Friday. This recital reflected great credit on Mr. Parker as a teacher. Superintendent Geeting was present on Thursday and made one of his good addresses. It was encouraging to have the State official present in our meeting. Julius Myres and "the *rural* quartette" rendered vocal music. The average attendance was 198. The secretary reports over \$50 *surplus* funds. Our annual fee is 50 cents. The institute, like all others, was voted the best we ever had.

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### PERSONAL.

- W. A. BRIGGS is No. 1 at Crisman.
- J. V. DEERE is located in Providence.
- O. P. WEST is in charge at Whiteland.
- THOS. SMITH is on top at Summitville.
- B. M. HOLLIDAY is principal at Livonia.
- CHAS. PLACKARD calls the roll at Orestes.
- N. E. YOST continues at his post at Porter.
- J. U. JONES unravels difficulties at Trafalgar.
- JOHN E. LUNG continues in charge at Geneva.
- J. W. TETER is master of the situation at Lapel.
- A. C. MOOSE untangles school troubles at Kouts.
- E. S. MILLER is holding the reins at Chesterton.
- A. A. RINGWALT holds the reins at Milan Centre.
- W. H. MILLER directs the schools at Linn Grove.
- ALDINE MORGAN settles school troubles at Poneto.
- E. L. KEMP is serving his second year at Reynolds.
- O. E. HAGLER grants all excuses at Liberty Centre.
- JNO. A. HILL is the principal of the Tipton high school.
- J. A. ANDERSON will try his hand another year at Berne.

W. H. KELLY is principal of the high school at Bluffton.

I. C. HAMILTON is at the head of school affairs at Ossian.

MISS LELL SEGUR is the high school principal at Decatur.

PHILIP E. RAUSCH has charge of the schools at New Haven.

SIDNEY K. GANIARD is principal of the Monroeville schools.

WELLMAN THRUSH holds the key to the situation at Keystone.

M. J. SEARLE is trying to renew the youthful mind at Nineveh.

J. B. PEARCY continues as principal of the Anderson high school.

OTIS WILLIAMS is trying to make "both ends meet" at Economy.

W. F. BRITTON is serving his first year as superintendent at Decatur.

W. A. HAMILTON will answer queries in regard to the Hebron schools.

F. G. HARCKER is doing what he can for the schools at Smith's Valley.

MRS. MARY G. MCCULLOUGH is principal of the schools at Pleasant Mills.

MISS LOUISE M. ROWE has accepted a principalship in the Alexandria schools.

A. McLAUGHLIN is the name of the new principal of the Stockwell schools.

VICTOR HEDGEPEETH, of Anderson, is teaching mathematics in the Peru high school.

MARK MOFFETT, of Owen County, is this year in charge of the Waveland schools.

J. B. FAGAN, formerly of Newton County, is now superintendent of the schools at Frankton.

J. V. BUSBY, formerly superintendent of Madison county, still continues to superintend the Alexandria schools.

FRANK H. COLYER, of the Paoli schools has accepted a position in the Southern Illinois State Normal School.

C. W. KIMMEL, for the past two years superintendent at Winamac, has charge of the schools at Butler this year.

J. T. RAGSDALE, formerly superintendent of the Rossville, Ill., schools, is the new superintendent at North Judson.

E. D. ALLEN has for many years been in charge of the Pendleton schools and is still rendering excellent satisfaction.

JUSTIN N. STUDY, in his first years' work as superintendent of schools, has made a good impression on the people of Ft. Wayne.

GEORGE S. WILSON continues to superintend the Greenfield school, and Bessie R. Herrick, A. M., is principal of the high school.

C. H. WOOD continues to be popular as superintendent of the Valparaiso schools and his popularity is merited by the quality of his work.

A. R. HARDESTY has entered upon his third year as superintendent at Hobart and the opening is the largest in the history of the schools.

T. F. FITZGIBBON, after a year's absence spent in the Indiana University, has returned to his old place, superintendent of the Elwood schools.

JNO. A. WOOD, formerly principal of the Frankfort high school, but since of the Indiana University, is the high school principal at LaPorte.

JESSE H. BROWN, former teacher of drawing in the Indianapolis schools is making quite a success of his popular entertainment—Picture Drawing.

WILL FEATHERINGILL, continues at the head of the Franklin schools, and Miss Kittie Palmer, of course, continues as principal of the high school.

DANIEL FREEMAN, after supervising the Elwood schools during the absence of Mr. Fitzgibbon, resumes his place as principal of the high school.

ALFRED J. BROWN, continues in charge of the Irvington schools. The new \$4,000 addition to the school house will afford much needed room and facilities.

A. H. SCHERER, formerly teacher of pedagogy in the Colorado normal school, but last year a student in I. U., is the new superintendent of the Knox schools.

ELMER E TYNER, for several years past of Greenwood, is now principal of a graded and commissioned township high school, Wayne township, Marion county.

C. T. LANE has for many years been principal of the Ft. Wayne high school, and if faithful efficient work can determine the matter, will remain many years longer.

CLARK WISSLER, a graduate of I. U., who did post-graduate work last year, has accepted the chair of experimental psychology in the Ohio State University at Columbus.

ALEXANDER CALDWELL, who has been in charge of the schools at Raub for the past eight years, has accepted the principalship at Boswell, where he will continue his good work.

E. B. BRYAN has moved from Irvington to Bloomington, and is now regularly installed as one of the I. U. faculty. Prof. Bryan is one of the most popular institute workers in the state, and properly so.

G. W. A. LUCKY, formerly superintendent of the Decatur schools, is now a member of the faculty of the University of Nebraska. He is specially interested in child-study as his article on another page will indicate.

LILLIAN PRARI BASSETT, daughter of Dr. T. J. Bassett, is teaching in the Fairmount high school. In her high school examination she did not fall below 98 per cent. in any subject. This is certainly a commendable record.

D. T. POWERS, a graduate of the State Normal and also of the State University, has accepted the superintendency of the Paoli schools. Mr. Powers has had several years of successful teaching and superintending and Paoli has been fortunate in securing his services.

JNO. G. MINNICK, one of the most promising teachers of Stark county died after a short illness, and was buried Sept. 13, just one week before he was to open again the same school he taught last year. Mr. Minnick had his plans made to start in next spring to complete a normal course of study.

JAMES C. BLACK, Ph. D., formerly superintendent of the Michigan City schools, was recently elected president of the State Normal school at Albion,

Idaho. He is now on the ground and has opened out the work in good shape. THE JOURNAL wishes for President Black the large success he deserves.

ELIAS BOLTZ has served six years as superintendent of the Dunkirk schools. In that time the schools made a steady growth. The enrollment went up from 308 in '91-2 to 794 in '96-7. He was never absent more than a half day at a time, and he put into a school library 632 volumes. This is a good record.

R. HEBER HOLBROOK, formerly of Lebanon, Ohio, but now a member of the faculty in the State Normal school at Clarion, Penn., worked in the Delaware county institute last year, and was so well liked that he was called back again this year. Prof. Holbrook does good work and is always agreeable and popular.

C. E. MORRIS served three years as principal of the Salem high school, and after a short absence was re-called as superintendent of the schools and is just entering upon his fifth year in that capacity. He has his schools well in hand, and with a new building and increased facilities will doubtless do better work the coming year than ever before.

PROF. S. E. HARWOOD, well and favorably known in Indiana, will continue at the head of the mathematical department of the Southern Illinois State Normal School at Carbondale. He reports the outlook for the school good. He says that the acting president, Prof. Parkinson, has matters well in hand, and that the six or eight *new* members of the faculty are making a good start.

STATE SUPERINTENDENT D. M. GEETING visited *thirty-seven* county institutes and in doing so travelled 4,315 miles. Up to date, Mr. Geeting has visited *fifty* counties—six of them twice—since his term began in March. At this rate he will easily reach all the counties during the term and have time to spare. He reports that everywhere the new compulsory law is accepted and acceptable, and is putting into the schools hundreds of boys and girls.

W. B. SINCLAIR, ex-superintendent of Stark county, will spend the coming fall and winter in the south. His first stopping place will be Chattanooga. The ill health of both himself and wife is the primary cause of

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# Delicious Drink

## RUMFORD'S ACID PHOSPHATE

with water and sugar only, makes a delicious, healthful and invigorating drink. Allays the thirst, aids digestion, and relieves the lassitude so common in midsummer.

Dr. M. H. Henry, of New York, says: "When completely tired out by prolonged wakefulness and overwork, it is of the greatest value to me. As a beverage it possesses charms beyond anything I know of in the form of medicine."

Descriptive pamphlet free. Rumford Chemical Works, Providence, R. I. Beware of Substitutes and Imitations. 6-11.



this move. In addition to this, Mr. Sinclair thinks that after twelve years of faithful and continuous service as county superintendent he has earned a vacation. The Journal congratulates him that he is able to take the rest, and hopes that the purpose of the trip may be fully realized.

PRESIDENT ALFRED HOLBROOK, the father of "Independent Normal Schools," has resigned the presidency of the National Normal at Lebanon, Ohio, which he founded in 1855, and accepted the chancellorship of the Southern Normal University, at Huntington, Tenn. President Holbrook is a remarkable man and in his forty-two years of service as president of his school, he has exercised a telling influence over thousands of lives. It will be difficult to think of the normal at Lebanon and not think of its venerable founder.

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### BUSINESS NOTICES.

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**WANTED.**—Agents to take subscription for magazine in connection with a saleable article. Big pay. Heeb Company, 30 Penn. St., Indianapolis.

**THE ELKHART ACADEMY OF SCIENCES, Elkhart, Ind.** Every teacher in the State should become a member. Circulars free. Address the Secy.

**HAIR** on ladies' faces, moles and other blemishes removed forever. VARIN, 25½ W. Washington St. Write or call when in the city. 7-4t.

**THOSE** who take the Business and Shorthand courses at the Indianapolis Business University secure good positions at once. Everybody knows it is the largest, oldest and best school in the State. 48th year opens Sept. 1.

**SCHOOL BOARDS** contemplating changes can learn the address of the best Western and Eastern teachers, willing to change places, by addressing Orville Brewer, manager of the Teachers' Co-operative Association, 101 Auditorium Bldg., Chicago. We can assure all who write of confidence and honorable treatment. 2-tf.

**THE INDIANA KINDERGARTEN AND PRIMARY NORMAL TRAINING SCHOOL**—Established in Indianapolis in 1882. Forty-five free scholarships granted each term. Two classes formed each year, one in September and one in February. For catalogue and particulars, address, MRS. ELIZA A. BLAKER, Superintendent, Indianapolis, Ind. 8-2t.

**MR. J. S. LEAHY**, General Southern Agent, C. H. & D. Ry., with headquarters at 4th and Vine Sts., Cincinnati, Ohio, has been appointed Agent for the Washington and Alaska Steamship Company and will handle this business in connection with C. H. & D. Ry. business to Alaska. Their steamers, "City of Seattle" and "Rosalie," are giving service every five or six days to Alaska and will run through the winter. They are magnificent steel steamers and make the run from Puget Sound to Dyce and Skaguay in 70 hours. Splendid accommodation for 500 passengers, fitted with electric light and every comfort for passengers. These steamers sail under the American flag.

**THE** motor car which the Baldwin people ship to the C. H. & D. Traction Company next week will, it is expected, prove an epoch in railroad local transportation matters. The design of the car is entirely new, nothing of this description ever having been attempted before in this country. It is calculated to run at high speed on the steam railroad track, and, at the same time, by virtue of condensing appliances, can be operated through the streets of a city without frightening horses. In this feature it is really not quite as offensive as the trolley line with its poles and attendant noises and sudden and startling flashes from the trolley connections. There are a great number of steam railroads in the country to-day anxiously awaiting the result of this experiment of the C. H. & D. people in the hope

that it may afford a solution of the problem which now faces them, of carrying people on such short hauls as the inter-urban lines can do without the impracticable feature of the trolley wire over the steam railroad track.

### \$300. TEACHERS' FREE COMPETITION.

For complete analysis, parsing italicized words and punctuation of the following sentence, \$300 in prizes will be given absolutely free. "As we were going to the Park by Rail I said to my wife if *opportunity* offers let us return by Steamer on the River." Send two-cent stamp for rules of competition, F. M. Shippey, Waterloo, Iowa. 10-2t.

### CHLORO-NAPHTHOLEUM,

The great disinfectant for schools. Meets all requirements of State Board of Health. Reduces the sickness among children. Non-poisonous and non-explosive. Costs 1½ cents per gallon, diluted. Adopted by New York, Chicago, Los Angeles, Cincinnati and Indianapolis schools.

WEST DISINFECTING Co., 31 West Market St., Indianapolis.

Reference: INDIANA SCHOOL JOURNAL, P. J. O'Meara, purchasing agent Indianapolis schools, Mr. Makepeace, Indianapolis. 3-tf.

### GROWTH OF THE N. N. U.

The Fall Session opens with an increased attendance. The forty-third year's work in the National Normal University, Lebanon, Ohio, was opened September 7, with an enthusiastic ingathering of both old and new students. Twenty-seven states are represented and the daily arrival of new pupils promises to swell the list beyond that of several years previous. The Medical, Law and Stenographic departments have doubled their enrollment over last year, while the classes organized in the departments of Science, Business and Liberal Arts were never more strong and earnest. A larger attendance than for many years is enrolled from the town itself. 10-1t

### THE BAY VIEW READING CIRCLE.

This year the members of the Bay View Reading Circle are to study Germany in a delightful course, and in the spring months will take up that wonderfully interesting nature study book, "A Song of Life." The Bay View course is making a great reputation. It seems admirably adapted to all conditions, has a sound educational plan, a short and low priced course, and the members receive valued help in their studies. The organization is growing rapidly. The secret seems to be that no one ever gives up the work. This is practically true, for the annual report states that but one organization has failed in an entire year. Those planing a literary club, or a private course will be interested. Headquarters are at Flint, Mich. Many young people's societies, teacher's and woman's clubs are taking the course with great enthusiasm. Circle now enrolls 7,000 students.

## TEACHERS WANTED!

Over 4,000 vacancies—several times as many vacancies as members. Must have more members. Several plans; two plans give free registration; one plan GUARANTEES positions. 10 cents pays for book containing plans and a \$5.00 love story of College days. No charge to employers for recommending teachers. Southern Teachers' Bureau, S. W. Cor. Main and 4th Sts., Louisville, Ky. REV. DR. O. M. SUTTON, A.M., President and Manager. Sutton Teachers' Bureau, 69 71 Dearborn Street, Chicago, Ill. Northwestern vacancies Chicago office, Southern vacancies Louisville office. One fee registers in both offices. 2-lyr

# INDIANA SCHOOL \* JOURNAL

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## COUNTING.

ROBERT J. ALEY.

Trusting that every reader will be kind enough to pardon a purely personal statement, I beg to relate the following experience, hoping to draw from it as a text some practical suggestions.

When a boy, I spent much of my time with my grandmother. In books, she was uneducated. Her reading was confined almost exclusively to the Bible. If she knew how to make and use figures I never found it out. She had, however, a highly developed number sense. All the calculations that came up in farm experience, she was able to make almost instantly and with absolute accuracy. She was also able to carry these results in mind for months, even years. One of my earliest recollections is of her teaching me to count. She taught me to count by *ones* forward and backward, and strange as it may seem, she did not stop short of one hundred. When I was thoroughly acquainted with the *number-system* by *ones*, she taught me to count forward and backward by *twos*, beginning first 2, 4, 6, etc., and then 1, 3, 5, 7, etc. When this was learned, I did the same with the *threes*, 3, 6, 9, etc., 1, 4, 7, 10, etc., 2, 5, 8, 11, etc. This same principle was extended to the *fours*, *fives*, *sixes*, *sevens*, *eights*, *nines*, and *tens*. In this way I got a most complete understanding of the *number-system*. This knowledge served me well, for I never had to learn an addition, subtraction, multiplication or division table. I knew all these, and more from the counting. So far as I am able to analyze my grandmother's almost marvelous power of

mental calculation, I find it to rest upon an intimate acquaintance with the *number-system* gotten by counting.

In the educational department of a western university, the number pedagogy of my grandmother has been put to the test. In the experimental school, *counting* is all that is done in number for the first year. It constitutes a large part of the work for the second and third years. Figures, the symbols of number, are taught early. The figure representation of numbers from one to one hundred, when placed on small squares of card-board, furnish material for most interesting and instructive *busy-work*. Arranging these cards so as to form the *number-system* by *ones*, *twos*, etc., is not only interesting but it points in the right direction. Those who have watched this western experiment tell us that the results have been very satisfactory. By the end of the third year the children know more number than children taught by other methods.

Any solution of the *number* problem that is not in harmony with number itself, and with mathematics must surely be to some degree faulty. On the other hand any solution that is in harmony with these things has that much in its favor. It does not take much of a mathematician to know that the fundamental thing in arithmetic, and, indeed, in all mathematics that has to do with quantity, is the *number-system*. By the *number-system* is meant that orderly, rhythmic succession of equal intervals which we first know as counting. Out of the *number-system* grow all the operations of pure arithmetic, and applied arithmetic is impossible until it has been preceded by the pure. We may say then that all arithmetic rests upon the number-system. The study of savage and half-civilized races everywhere has shown that the knowledge of arithmetic is in exact ratio to the development of the *number-system*. Since the *number-system* is fundamental, it would seem reasonable that the best preparation for arithmetic would be forming an acquaintance with this *number-system*. This acquaintance can be best formed through counting. Hence, counting would seem to be not only a legitimate, but a necessary work in early school life.

The question naturally arises, is counting suited to the mental conditions of young school children? It seems to be, because all children take delight in it. Every child likes to exhibit his power in this particular and takes keen pleasure in his own

growth. It has been many times urged against counting, that by it the children get many wrong notions of number. In general they do not do so, and if they did, it would still be no argument against it. Children are constantly getting wrong notions, and it is generally supposed to be part of the teacher's business to correct these wrong notions. It is frequently argued that because a child can not objectify the numbers he names in counting, he does not understand them and therefore should not count. I can not objectify a telephone, but I can order my groceries by means of it. The dictum, "Nothing is valid in arithmetic (including number work) which can not be correctly illustrated," has had much to do in bringing counting into disrepute. The only defect in this dictum is its total lack of truth. In mathematics the abstract (theoretical) always precedes the concrete (practical). A thing may be mathematically valid centuries before there is a concrete expression of it. It may be valid even though there is never a concrete expression. The mathematics which made possible the Brooklyn bridge was valid many years before that structure was a concrete reality. So counting is valid even though the counter has not the ability to concretely illustrate it. It is the counting which later will make him know arithmetic and which will give him power to answer many questions out of his experience.

Good, old-fashioned counting should be dignified in our schools. It is correct from the arithmetical standpoint, and it seems to fit admirably to the mental condition of the child.

Indiana University.

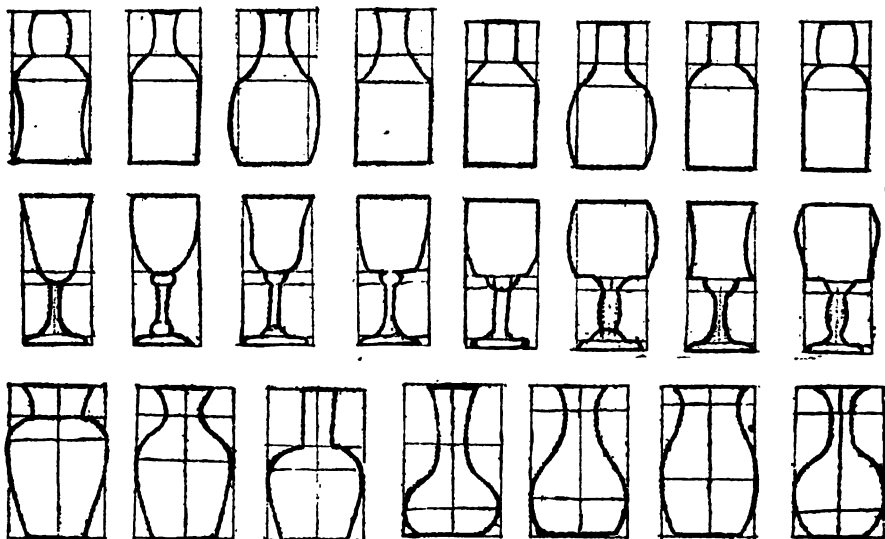
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## LESSONS IN DRAWING.

W. T. PARKS.

The accompanying illustrations represent some of the common forms around us. All are based upon the "vase form," one of the most beautiful forms. They are very simple and well adapted to dictation work. The first step in teaching such a form is to secure a model and place it before the pupils, which is very easy indeed. If nothing better is at hand an ordinary tumbler, lamp chimney or bowl will serve nicely. The teacher that looks will find something and if she looks intelligently and carefully, she will find something good. The next step is to draw lightly on the "board" an oblong as shown here; lastly, draw a center line

and then the form within. Cross lines, as shown here, to indicate narrowest and widest points, etc., will often be most helpful. The left side of the "vase form" should be drawn first and the right side made to correspond. It may be found rather difficult to get the two sides alike at first but careful, thoughtful and oft-repeated practice will lead to success. Much attention should be given to the "vase form." Select the most beautiful for models. Pitchers, tumblers, etc., based upon it are in abundance.



Instructions in drawing should have a much higher aim than simply hand-training; this is valuable but only secondary in importance. The real aim of drawing should be to cultivate taste, to teach the child not only to recognize but fully to appreciate the beautiful whether in nature, art or action and to inspire him to high ideals. Instruction in drawing which so aims, must lead to brighter, broader and better lives—instruction that aims at less, is not worthy the name. It is well to teach the child to study and delineate all forms which surround us; but this should form only a part of the work in drawing. The child should be taught early to seek and portray the beautiful mainly. I wonder how many of us are fit guides? I wonder how many of us really make an earnest effort in this direction? How many of us are continually seeking beautiful models to place before our pupils? Such

are all around us, if we will but open our eyes and see. Will we? We alone must determine. Again, I want to say that if our instruction in drawing leads our pupils to no higher results than the ability to draw boxes, pumpkins etc., our work has been a complete failure.

Denver, Colorado.

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## LABORATORY METHOD IN A PRIMARY SCHOOL.

MARTHA JEWETT.

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Plant and animal life select for themselves, digest and assimilate from the natural world those things necessary to existence; so the mind, like matter chooses from its surroundings that most needed for its peculiar development. The method in primary work that is most successful is that which is adapted to the greatest number of minds—that which will develop the greatest amount of brain power.

Why is the child sent to school? Is he expected to retain until manhood everything taught him, or will he make a part of himself the elements of that instruction that will tend to increase his growth, and—woe to his teachers—forget the rest?

There is every possibility of as much individuality in our common graded schools as there can be individual thinking and acting under our common law; and the advocates of the so-called "laboratory method" should consider that a school in a system is a miniature community, although existing under a common law, yet being developed and strengthened individually; and that the aim is preparation for good citizenship, that everything else is subservient to this.

A training is requisite for all ends to be gained whether physical, intellectual or spiritual. Does a race horse enter the track and make a record without training? No, neither can human beings enter the arena of life and achieve victory without that developing process that is needed for their own peculiar work.

If we wish to have a powerful muscle, we exercise. What method of exercise we adopt matters little, so we systematically and continually use the muscle. This discipline is particularly necessary in mathematics. Rapidity of thought and concentration of the mental powers, which give correct judgment are taught here.

With this end in view the child in the primary grades should be taught not only accuracy, but quickness in the number work. Frequently pupils in the upper grades, who lag behind their classes in arithmetic can not add quickly or accurately. Addition, subtraction, multiplication and division are pure memory work. The children in these early years must use their memory faculties to the fullest extent; their reasoning powers are just beginning to dawn and the clearness of their conception and judgment in after years, will depend entirely on the rapidity and accuracy gained earlier in the constant exercise of the memory and the powers of concentration.

Rapidity in addition is the firmest foundation on which to base the work in mathematics. This is acquired only by constant drill and practice. In a second grade, where children have mastered combinations and separations from one to twenty with fractional parts (Grube method), ask very rapidly, 6 plus 14, take away 2, take  $\frac{1}{2}$ , add 8, take  $\frac{1}{2}$ , multiply by 3, subtract 1, take  $\frac{1}{2}$ , add 17, take away 1, take  $\frac{1}{2}$  and call for an answer. Children trained for five minutes per day, early in the morning, will astonish one at the end of six weeks, by their power of concentration and rapidity of thought. Require accuracy and rapidity and it will be discovered that the memory will be developed and the power of reasoning strengthened.

Evansville, Ind.

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### ON OBSERVING CHILDREN.

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BY SANFORD BELL.

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There are very few live teachers who have not either directly or indirectly come under the influence of the child-study movement. Every teacher worthy of the name now realizes that a knowledge of child nature is absolutely necessary in order that she may properly culture the children entrusted to her care; that her teaching can only be rational in proportion as it harmonizes with the physical and mental make-up of the child; that her only true guide to such rational teaching is her sympathetic insight into the laws that govern the healthy growth of both body and soul.

Never before in the history of the race was the desire for



knowledge of the child so keen and so universal. Mothers, fathers, nurses, teachers and scientists are all studying the child at times and in ways no longer dictated by chance. This is the most hopeful sign of the times. It portends results to civilization that are of great fundamental significance. On the part of teachers, especially, this desire for an understanding of the childlife is fed from two sources: *First*, from a study of such sciences as psychology, both *adult* and *genetic*, ethnology, physiology, anatomy, and hygiene; *second*, from direct observation. It is about this second source of information concerning the child that I wish to write briefly.

There are many teachers who want to make observations, but do not know how. Perhaps a few suggestions can be offered here that will be helpful. In the first place, teachers as a rule are not as self-directive as they can be. They haven't confidence enough in their common sense. They have been so perpetually dependent upon normal schools and text-books, superintendents, and principals, that it has not occurred to them that they can act from within. This is a bad reflection upon training schools, superintendents, and principals. The primary function of these powers should be to make the teacher self-directive instead of dependent; to put her into possession of herself first, and through this into possession of their own convictions, theories and educational formulae. If one of these teachers who is ordinarily helpless in making original observations on her own school children should become interested in rearing pot flowers to beautify her room, or outdoor plants for the pleasure or profit there is in them, she would not be long in discovering the nature of the plants in either case and learning the kind of soil they thrive in, the amount of moisture, the kind and frequency of treatment their growth demands. If she should go to a zoological garden and should come across an animal whose characteristics, habits, and ways of life she was not familiar with, she would immediately use her common sense in scrutinizing its general make-up; in noting its actions; in finding out what it eats; where it came from; if domesticated what it is good for; what treatment it receives from the keeper in order that it may live; how he adapts its environment to its natural demands, and how it adapts itself to a changed environment. If the keeper should turn his back a moment she would probably offer it nuts, candies, bits of grass, or grain to

discover its likes or dislikes, or what is more probably poke it with her parasol to see how it responds to a stimulus to which there is a point. In these instances a thorough knowledge of botany and zoology respectively would have been of incalculable value, but after all her common sense would have been the most important factor. Why does not the teacher use the same self-directive power in studying her children? Perhaps the one point of analogy where she does use her original self-direction most is in the poking.

We will not have space here to discuss the necessity or at least the *benefit* of fore-knowledge that is scientific, in making observations on children. Since there are teachers now in charge of schools, who have not this scientific knowledge, we must take them as they are and direct them in their study of the children first hand in the light of their empiric knowledge, insisting in the mean time that they avail themselves of this scientific equipment as soon as possible. Indeed I have found it to be true that the strongest stimulus to this scientific preparation comes from making observations and feeling its need. I have known many teachers to be led into systematic study of psychology, physiology and related sciences through the interest aroused by their empiric observations.

I shall indicate two lines of observation that every teacher can make with results that will surprise her. The first is that of keeping a detailed record—a sort of psycho—physical biography of each pupil during the school year, noting minutely every characteristic, every habit, every peculiarity either of body or mind, his likes and dislikes, what he is strong in and what he is weak in, what he is interested in out of school, the kind of companions he associates with, and their favorite pastimes, the ones that sway him most, the work he is most patient and painstaking with, what he fears, what he respects, etc., etc. Let the teacher make as complete and accurate a record as she can at first and then recur time and again with new revelations adding every observation that will throw any light upon the child's condition. In light of the insight she has gained from her observations she will try to create new interests, stimulate lagging ones, foster budding ones and stifle perverting ones. Let her conscientiously record the effect of her treatment in all such cases. Any *one* of such observations may lead to nothing, but their accumulated rev-

elations can not fail to bless both teacher and pupil. I shall give the following observation to illustrate the point. It was given to me by the teacher who made it soon after her school opened. I give it exactly as she gave it to me :

Leland W——, age 13, short of his age, very muscular, keen grey eyes and light hair, has a very intelligent face ; is always fidgeting, can not keep him still in school, on the playground he is always running, jumping, climbing, turning cart wheels, etc. ; is a leader among the boys, is president of a secret society of fourteen boys that meet at night in his father's basement—can not find out what they do ; is *taciturn*, does not even talk much to his comrades ; enjoys history and adventure, geography and travel ; despises grammar ; does not like arithmetic ; reads *very* much ; Henty and Alger are his favorite writers—he has read everything that each of these has written. I have noticed that he always questions the reality of myths, fables, and fictitious writings, treating everything that is not real with a sneer. He works rapidly but slovenly. He has no respect for our religious morning exercises. He is hard to manage.

Later, I find that his father is a pronounced infidel, and that his mother is mentally unbalanced, has been an invalid for years. Leland is much with his father, has traveled with him a great deal.

What teacher could make such an observation as the above and not be better able to reach and properly culture this boy who is so much like many another that gives his teacher untold trouble ? And who can not make such observations ? The above, perhaps, indicates a keenness not ordinarily seen in teachers, but why, if so ? This teacher has been accustomed to observing her pupils and she has not had a great deal of scientific preparation either. One will be surprised to find interest increasing and details multiplying when one has once begun. But the teacher will probably say, "I have forty-five pupils of different ages and stages of development and I simply can not record observations on so many." All right, do what you can. But can you not make such a record of each pupil ? I question you there. You make a mental estimate that dictates your treatment of him any way. You could tell your county or city superintendent, or another teacher, or a parent about any child you have in your care. And in making out his monthly report, is it not your mental summary of the boy that dictates his grades ? And does not that mental equation that stands for the boy too often fluctuate with your moods ? If you are feeling well, he stands up in the nineties, if you feel ill, he goes down into the seventies. Of course this is questionable justice, but who is ready to throw the

first stone? Now, would it not be better to rely on something tangible, upon your accumulated records during the month? Is it not due to the child that your treatment of him shall be dictated by facts that are true about him, rather than by your coenesthesia, or more particularly the condition of your liver? And will not your mental estimate of the child be more accurate in every instance *if you record your observations?* A teacher may persuade herself that she has a very perfect understanding of a child's character. Let her test herself by simply analyzing and recording such understanding and she will many times be surprised to find it *vague* and *defective*. I know of a number of teachers who are making just such records, and they invariably testify to the good results that have come to them and wonder how they ever got along in the past without them. The best results that come from such observations are not, however, from the facts recorded but from the close touch of teacher with pupil, from the *intelligent interest*, the *sympathetic understanding* that inevitably come with such direct study.

I shall only briefly indicate the second kind of observation which any teacher can make. I shall elaborate the same at another time. This kind is more fragmentary than the other. Observe any act of the child and seek its explanation. Take any psychosis, account for it; see if you can give a satisfactory interpretation of it. See if you can get at the inside machinery of the child's active mind. Search out all the details of the act and see if you can classify it. Was it an act of imitation, of suggestion, of association, of reason, of fear, anger, jealousy, love, or what? After you have satisfactorily classified it, go back and re-study its characteristics.

Valparaiso, Ind.

[TO BE CONTINUED.]

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The time draws near the birth of Christ;  
The moon is hid; the night is still;  
The Christmas bells from hill to hill  
Answer each other in the mist.

Rise happy morn! rise holy morn!  
Draw forth the cheerful day from night;  
O Father! touch the east and light  
The light that shone when hope was born.

—Tennyson.

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**DEPARTMENT OF PEDAGOGY.**

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**THE FALLACY OF DISCIPLINE.**

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**ARNOLD TOMPKINS.**

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I do not mean that discipline is a fallacy; but there is a theory of education which emphasizes mere discipline to the exclusion of knowledge, to the detriment of both discipline and knowledge. The relation of the subjective to the objective is organic, and to consider mere subjective activity as disciplinary, regardless of the value of the objective relation, is as disastrous to education as to consider knowledge a mere objective existence—something ready made to be gotten into the mind for its information. While the latter is responsible for the mechanical routine of the school room, the former is responsible for a sort of mediæval dialectics and fruitless beating of the air in teaching which passes as superfine method. It is Fichte's idealism and subjectivity run mad.

This subjective teaching is encouraged all along by an antiquated psychology which holds that subjects are taught for their respective disciplinary values. Yet there is no sort of correspondence between the discipline the pupil needs and the studies mapped out in the curriculum. Besides, every study exercises every faculty to the utmost. We talk glibly about observation studies, without stopping to think that all studies are observation studies, and that, therefore, there is no ground for the distinction. Every subject cultivates the reason, and in its highest forms. Yes, the subjects do, perhaps, vary in the way in which they exercise the different faculties; but no more than do parts of the same subject. Who will undertake to slice up the subjective world into subjects according to the psychical activities of the learner?

Primarily, it is not discipline which the teacher must keep in mind, but an all-sided touch with the life of the world in which the pupil lives and moves and has his being. The leaf lives in and through the twig, and the twig in and through the limb, and the tree. And the tree itself lives in and through the organic life about it. It is only one term in a world process. What the tree is vitally concerned in is not its subjective discipline but in

appropriating the life of the world about it. Its subjective activity comes in and through its process of life with its environment.

The soul lives in and through its environing spirit, which is manifested in the objective world. The fundamental instinct of the soul is for the larger life of the world beyond it. This instinct is the basis of education. The subjects of study are only so many points of touch of the soul with the objective world. Each subject arises out of the soul's tension with its objective environment. For instance, man, in his effort to self-realization, finds himself conditioned and limited by his physical environment. This tension—strain—relation gives rise to geography. Number, we are told, arises from man's effort to adjust accurately and economically means to ends in the objective world. History arises in man's tension with his fellowman in form of institutions. Thus every subject of study is a form of man's activity in relation to the objective world. The soul must have more life, and the subjects are the avenues through which it secures it.

On the disciplinary theory, Choctaw would be as valuable as Latin, but there is a vast difference as to the mind's outlook in the two cases. Latin opens the way to a larger life in the Roman people; besides, it opens the way into other languages. This is simple enough; but with all the talk about the disciplinary value of Latin, who has been able to make its peculiar value perfectly clear? French is more valuable than Canadian French, for obvious reasons which are not disciplinary. A knowledge of German is worth more than a knowledge of the Turkish language, but would not a year of hard study on the one be as disciplinary as the same effort for one year on the other? At least, the first difference is so obvious that a wayfaring man though a pedagogue need not err, while it would require the most subtle philosophy to disclose the other. In fact, I doubt if any one has ever been satisfied with any statement of the difference in the value of subjects on the score of discipline.

Activity and the resulting discipline are only means of enlarging the life by an appropriation of the objective spirit of the world. The teacher has but one concern, and that is to secure the completest converse of the subject with the object. The mind will thus be brought into its fullest and most healthful activity; and, therefore, will be the most effectively disciplined. Intellectual discipline, like moral discipline, requires self-forgetfulness in the

objective world. The chief concern of the educator is to secure the fullest attachment of the pupil to objective problems. A man is useless until he is attached to something other than himself. Religion becomes morbid when the individual turns inward to note too curiously the state of the soul. The religious man forgets his soul and goes forth to better the world. When a pupil is all the time thinking that he is thinking, he is not thinking but suffocating thought.

In this general line of thought the reader may find a valuable article by Dr. Small, in the May number of the *American Journal of Sociology*. I quote some statements.

"Our business as teachers is primarily, therefore, not to train particular mental powers, but to select points of contact between learning minds and the reality that is to be learned."

"In other words, the demand of sociology on pedagogy is that it shall stop wet-nursing orphan faculties and find out how to bring persons into touch with what objectively is, as it is. The mind itself will do the rest."

"Physical, biological and social science, with the products of human thought deposited in literature, are worthy of study, not because they are assorted tonics for corresponding kinds of mental impotence, but because they are revealers of man himself and of the life of which he is both creator and creature."

For the purpose of enforcing what seems to me a vital thought, and caution against a dangerous error, I insert, as an example of the extreme disciplinary theory, one of the stenographic reports in the Indiana State Course of Study. It is a lesson on the word, prepares, page 152. I can not, in this lesson, make out what those pupils were thinking for, except it be for the fun of thinking. They knew as much about the word at the outset as they knew at the close, and perhaps more. This is a case of method for the sake of method. The old bane of the teacher was mechanical manipulation. The skillful use of devices meant skillful teaching. The bane of the present teacher, especially the trained teacher, is mental processes for the sake of the processes. Again, it is method for the sake of the method; and it may be a question if one is not as mechanical as the other. The pugilist, when he can not pound the other fellow, pounds a bag of sand; his activity must be directed to objective reality, but in some of our teaching, we do not even supply the bag of sand.

The following is the lesson referred to :

LESSON IN LANGUAGE.

THIRD YEAR.

Average Age of Pupils, Nine.

NOTE.—An attempt is here made to bring out the fact that the word "prepares" has the attribute "*action*" expressed. The word is one taken from a sentence just completed by the same pupils in work in language. The sentence in which it had occurred was, "He prepares to harvest it." For the lesson which follows, the verb "prepares" was placed before the children in the sentence, "He prepares it for us." The pupils were directed to produce for the actor and the action expressed by this sentence, an environment. In a lesson previous to the following one, the environments as wholes, in reference to their appropriateness and general accuracy, were worked upon, one being placed before the children in order to be corrected by them, if necessary. This story, or environment, is made use of in the following lesson. The expression, "my story," as used by the teacher, refers to the sentence, "He prepares it for us."

Teacher. Attention. You may read your story, Stella.

Stella. "A little girl in this room asked you if you would take us up to the laboratory. You said you did not know whether the man that takes care of the room would have the skeleton ready for us; but 'I will ask him if it will be all right.' He said it would. You told us we could go into the laboratory, *so he prepares it for us.*"

Teacher. That will do. What do you think of that, Ethel?

Ethel. I don't think it is right.

Teacher. Why not?

Ethel. I don't think she has a good sentence.

Teacher. What must she have as a sentence to give the story that we want to-day, Emma?

Emma. She must have, "He prepares it for us."

Teacher. That will do. Yes. What does "prepares" mean in your story, Stella?

Stella. I think it means "gets the skeleton ready."

Teacher. Tell me what she said, Martha.

Martha. Stella said, "gets the skeleton ready."

Teacher. That will do. I will write it. (Writes, "gets the skeleton ready.") You may read your story, Herbert.

Herbert. "The baker makes bread and *prepares it for us.*"

Teacher. Have you my story there?

Herbert. Yes.

Teacher. Read the story that you think is the same as mine.

Herbert. "He prepares it for us."

Teacher. Have you it written in the same way that I have my story written?

Herbert. Yes.



Teacher. You began "he" with a capital?

Herbert. Yes.

Teacher. Should he have done so, judging from the way he read his story, Helen?

Helen. No, ma'am.

Teacher. When should he begin with a capital?

Helen. I think he should commence a word with a capital when it is at the beginning of a sentence.

Teacher. Show me that it is not at the beginning of a sentence.

Helen. "And he prepares it for us."

Teacher. You think "and" is a part of the sentence in his story?

Helen. Yes.

Teacher. *You* may read your story, Helen.

Helen. "Once we were going to move. We were going to Chicago. Before starting we had a man to go. When he arose *he prepares it for us.*"

Teacher. Arose? Tell her what she might say, Ethel.

Ethel. I think she might say "when he reached there."

Teacher. What is another word that she might say, Ethel?

Ethel. She might say "reaches."

Teacher. What is the word Ethel says you might use, Helen?

Helen. Reached.

Teacher. Have you used my story correctly in your story, Helen?

Helen. I think I have.

Teacher. When he reached there—what?

Helen. He prepares it for us.

Teacher. Suppose I say, "when he reaches there." What would you say then?

Helen. He prepares it for us.

Teacher. Emma.

Emma. He prepares it for us.

Teacher. What do we say, Helen?

Helen. He prepares it for us.

Teacher. Is she correct, Martha?

Martha. Yes.

Teacher. Yes. But you haven't my story, "He prepares it for us." You may read the story on the board, Chapline?

Chapline. "Jesus went to Jerusalem. Before he reached there he told his apostles to go and get ready a feast at Jerusalem. They arose and went and told the landlord to make the feast. Then they went to Jesus and said, 'He prepares it for us.'"

Teacher. You may tell us what "prepares" means in that story.

Chapline. I think it means that the landlord got the feast ready.

Teacher. Then "prepares" means the landlord?

Chapline. No.

Teacher. What?

Chapline. Got it ready.

Teacher. Then "prepares" means "it."

Chapline. No.

Teacher. What, then, does "prepares" mean?

Chapline. It means "got ready."

Teacher. Read your story from the board, Chapline.

Chapline reads: "Jesus went to Jerusalem," etc.

Teacher. What does "prepares" mean there?

Chapline. It means "got ready."

Teacher. The other day?

Chapline. No.

Teacher. Then would you say "got ready?"

Chapline. Yes.

Teacher. Ethel.

Ethel. We would say "gets ready."

Teacher. Emma.

Emma. "Gets ready."

Teacher writes, "got ready."

Teacher. Your story, Byron.

Byron. Once I went to the meat shop for some meat. I waited about an hour, there were so many people before me. I returned home. I said to mamma, "He prepares it for us."

Teacher. What does the word "prepares" mean in your story, Byron?

Byron. Gets the meat ready.

Teacher. But tell me some other things about the getting ready so that I may understand what it takes to get the meat ready.

Byron. He might wrap it up.

Teacher. Is there something he might do before wrapping it up?

Byron. Yes, he finds out what I ask for.

Teacher. Perhaps he needs to do something else when he finds out. What, Stella?

Stella. He will have to take off as much as Byron asks for.

Teacher. What else?

Martha. He cuts it.

Teacher. Is that right, Byron.

Byron. Yes.

Teacher. Tell me two things that the man does, Byron.

Byron. He gets as much as I want and cuts it.

Teacher. You told me something else a while ago.

Byron. He gets as much as I ask for and cuts and wraps it up.

Teacher. But I want the two most important things that he does.

Byron. He cuts and wraps it up.

Teacher. Does "prepares" mean "he?"

Byron. No.

Teacher. What does it mean?

Byron. Cuts and wraps it up.

Teacher writes on the board, "Cuts and wraps it up."

Teacher. Lay aside you tablets, class. Attention to the first meaning of "prepares." In Stella's story, do you think that "prepares" means exactly what she has said, Edward?

Edward. I don't think it does.

Teacher. What does it mean in her story?

Edward. I think it meant skeleton.

Teacher. How many think it does not mean skeleton? (Hands.)

Teacher. Give me the story in which we used this same word that we are working upon to-day.

Edward. He prepares to harvest it for us.

Teacher. Does "prepares" there have anything to do with the skeleton?

Edward. No.

Teacher. It does not mean skeleton there, then?

Edward. No.

Teacher. Does it mean anything about the skeleton in Chapline's story?

Edward. No.

Teacher. Do you think the word itself has anything in it of the meaning of skeleton?

Edward. I think it (hesitates).

Teacher. Did Stella use the word "skeleton" in her story in any place?

Edward. Yes.

Teacher. What did she mean?

Edward. I think she meant skeleton.

Teacher. Do you think she used the right word there?

Edward. I think, in a certain way, she did.

Teacher. Does the preparing of it mean the skeleton itself?

Edward. No.

Teacher. What did "prepares" mean in your story, Stella?

Stella. "Gets ready."

Teacher strikes out the words, "the skeleton."

Teacher. In the next meaning on the board is there anything given for the meaning of "prepares" besides what it really says, Bradford?

Bradford. "The feast."

Teacher. How many think "prepares" does not mean the feast? (Hands.) What is the meaning of "prepares?"

Bradford. Gets ready.

Teacher. Is there anything that is told in the next meaning of "prepares" that is not in it Laura?

Laura. "It and wraps up."

Teacher. That will do.

Teacher. What does "it" mean, Will?

Will. "It" means the meat.

Teacher. Does preparing this thing mean the subject meat?

Will. I think it does.

Teacher. Do we need a word that means *meat* in talking about the word "prepares."

Will. I don't think we do.

Teacher. Byron says: "He prepares the meat for us." Listen. Then it means, "He gets it and wraps it up the meat for us." Is that right, Will?

Will. I don't think it is.

Teacher. That will do. You may give it Blackford.

Bradford. Cuts and wraps it up the meat for us.

Teacher. Give the whole story that Byron gave, simply supplying the word that this is meant for.

Bradford. Cuts and wraps it up.

Teacher. But we must have "for us" in his story. (Bradford hesitates.)

Teacher. What was the last sentence in his story.

Bradford. He prepares it for us.

Teacher. But Byron says that "cuts and wraps it up" is the meaning of prepares. If it is we must be able to give this whole meaning for how many words?

Bradford. One.

Teacher. Because we are talking about how many words in this story?

Bradford. One.

Teacher. What is the meaning that Byron gives.

Chapline. He cuts and wraps it up for us.

Teacher. Is that a good story?

Chapline. No.

Teacher. What is wrong?

Chapline. He has "it" where it ought not to be.

Teacher. Yes; why ought not it be there?

Chapline. It sounds bad.

Teacher. Perhaps you would like to read it, "He cuts it and wraps it up for us." Now tell me why it is not right.

Chapline. Because it says "up" and doesn't need to say it there.

Teacher. How many times has "it" been used?

Chapline. Two times.

Teacher. How many shall we take out?

Chapline. One.

Teacher. Which one?

Chapline. The one that is first.

Teacher. Read it leaving that out.

Chapline. He cuts and wraps it up for us.

Teacher. Could you give it any other way?

Chapline. Yes.

Teacher. Give it.

Chapline. He cuts and wraps it up for us.

Teacher. Is that good?

Chapline. No.

Teacher. Could you make it better by dropping the first "it?"

Chapline. He cuts and wraps it up for us.

Teacher. That will do for the present. What would make it sound better, Arthur?

Arthur hesitates.

Teacher. Herbert.

Herbert. He cuts and wraps it for us.

Teacher. Then you want to leave out "up?"

Herbert. I think that makes it sound better.

Teacher. That will do.

Teacher. We have "it" in this story here. Does "prepares" mean "it" in this story, Helen?

Helen. I don't think it does.

Teacher. Then we shall say that "prepares" means—

Helen. Cuts and wraps.

Teacher. Does "prepares" mean that? Read what we have left in the last, Frances.

Frances. Cuts and wraps.

Teacher. That will do. Do you like the correction Martha?

Martha. I think I do.

Teacher. Then we would have "prepares" meaning what, Martha?

Martha. I think it means cuts the meat and wraps it.

Teacher. Ethel.

Ethel. Cuts and wraps.

Teacher. Correct. Read the three meanings of "prepares" that we have been given by the different pupils, Mabel?

Mabel. Gets ready, gets ready and cuts and wraps.

Teacher. Look at the three stories. Tell me one thing that each of them says about "prepares," Herbert.

Herbert. It might say that something was gotten ready.

Teacher. That will do. Would you say it in a different way, Ruth?

Ruth. You might say anything that was gotten ready.

Teacher. Shall we say that "prepares" means something and anything, Helen?

Helen. I don't think we shall.

Teacher. What would you tell me that those three things mean about "prepares."

Helen. That something has been done.

Teacher. Then "prepares" means something.

Helen. No ma'am.

Teacher. What does "prepares" mean in the first place?

Helen. "Gets ready."

Teacher. And in the second place, Chapline?

Chapline. "Gets ready."

Teacher. In the third?

Chapline. "Cuts and wraps."

Teacher. What is it to get ready.

Chapline. It means to get things in the way you want them.

Helen. It means to get things in the right way.

Teacher. Stella.

Stella. I don't know.

Teacher. What is it to get ready, Herbert?

Herbert. I think it is to fix.

Teacher. Tell me in another way.

Ethel. I think it means to make things nice.

Teacher. Sometimes you may arrange to go riding?

Ethel. Yes ma'am.  
Teacher. Sometimes you open your inkwell?  
Ethel. Yes ma'am.  
Teacher. Sometimes you might sing?  
Ethel. Yes ma'am.  
Teacher. Would you be getting ready for music lesson?  
Ethel. Yes ma'am.  
Teacher. But all these things are—  
Ethel. I don't know.  
Teacher. Helen.  
Helen. Preparing.  
Teacher. But you are using "preparing" to tell the meaning. We would like something else to tell the meaning. Edward.  
Edward. I think it is doing.  
Teacher. Then what does "preparing" mean?  
Edward. I think "preparing" means doing.  
Teacher. Helen.  
Helen. I think "preparing" means doing or acting.  
Teacher. Then if "preparing" means "doing or acting" what does "prepares" mean, Victorine?  
Victorine. "Prepares" means "does or acts."  
Teacher. Martha.  
Martha. "Prepares" means "does or acts."  
Teacher. We will leave it for to-day. But you may think of this: Our first sentence was, "He prepares it for us." Are you ready to place "does" or "acts" instead of "prepares," and thus give the following: "He does or acts it for us."

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## **PRIMARY DEPARTMENT.**

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the Anderson Schools.*

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### **SANTA CLAUS AND THE MOUSE.**

One Christmas eve, when Santa Claus  
Came to a certain house,  
To fill the children's stockings there,  
He found a little mouse.  
"A merry Christmas, little friend,"  
Said Santa, good and kind.  
"The same to you, sir," said the mouse;  
"I thought you wouldn't mind,  
"If I should stay awake to-night  
And watch you for a while."  
"You're very welcome, little mouse,"  
Said Santa, with a smile.

And then he filled the stockings up  
Before the mouse could wink—  
From toe to top, from top to toe,  
There wasn't left a chink.

"Now, they won't hold another thing,"  
Said Santa Claus with pride.  
A twinkle came in mouse's eyes,  
But humbly he replied :

"It's not polite to contradict—  
Your pardon I implore—  
But in the fullest stocking there  
I could put one thing more."

"Oh, ho!" laughed Santa, "silly mouse,  
Don't I know how to pack?  
By filling stockings all these years,  
I should have learned the knack."

And then he took the stocking down  
From where it hung so high,  
And said, "Now, put in one thing more;  
I give you leave to try."

The mousie chuckled to himself  
And then he softly stole  
Right to the stocking's crowded toe,  
And gnawed a little hole!

"Now, if you please, good Santa Claus,  
I've put in one thing more;  
For you will own that little hole  
Was not in there before."

How Santa Claus did laugh and laugh!  
And then he gayly spoke:

"Well! you shall have a Christmas cheese  
For that nice little joke."

If you don't think this story true,  
Why! I can show to you  
The very stocking with the hole  
The little monse gnawed through.

—*St. Nicholas.*

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### THE FESTIVAL OF ST. NICHOLAS.

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We all know before the Christmas tree began to flourish in the home-life of our country, a certain "right jolly elf," with "eight tiny reindeer," used to drive his sleigh load of toys up to our house tops, and then bound down the chimney to fill the

stockings so hopefully hung by the fireplace. His friends called him Santa Claus ; and those who were most intimate ventured to say " Old Nick." It was said that he originally came from Holland. Doubtless he did ; but, if so, he certainly, like many other foreigners, changed his ways very much after landing upon our shores. In Holland, St. Nicholas is a veritable saint, and often appears in full costume, with his embroidered robes, glittering with gems and gold, his mitre, his crosier, and his jewelled gloves. Here, Santa Claus comes rollicking along on the 25th of December, our holy Christmas morn ; but in Holland, St. Nicholas visits earth on the 5th, a time especially appointed to him. Early on the morning of the 6th, which is St. Nicholas Day, he distributes his candies, toys, and treasures, then vanishes for a year.

Christmas Day is devoted by the Hollanders to church-rites and pleasant family visiting. It is on St. Nicholas eve that their young people become half wild with joy and expectation. To some of them it is a sorry time ; for the saint is very candid, and, if any of them have been bad during the past year, he 'is quite sure to tell them so. Sometimes he carries a birch rod under his arm, and advises the parents to give them scoldings in place of confections, and floggings instead of toys.

It was well that the boys hastened to their abodes on that bright winter evening ; for in less than an hour afterwards, the saint made his appearance in half the homes of Holland. He visited the king's palace, and in the self-same moment appeared in Anne Bouman's comfortable home. Probably one of our silver half-dollars would have purchased all that his saintship left at the peasant Bouman's. But a half-dollar's worth will sometimes do for the poor what hundreds of dollars may fail to do for the rich ; it makes them happy and grateful, fills them with new peace and love.

Hilda van Gleck's little brothers and sisters were in a high state of excitement that night. They had been admitted into the grand parlor ; they were dressed in their best, and had been given two cakes apiece at supper. Hilda was as joyous as any. Why not ? St. Nicholas could never cross a girl of fourteen from his list, just because she was tall, and looked almost like a woman. On the contrary, he would probably exert himself to do honor to such an august-looking damsel. Who could tell ? So she sported and laughed and danced as gayly as the youngest, and was the



soul of all their merry games. Father, mother and grandmother looked on approvingly ; so did grandfather, before he spread his large red handkerchief over his face, leaving only the top of his skull-cap visible. This kerchief was his ensign of sleep.

Earlier in the evening, all had joined in the fun. In the general hilarity, there had seemed to be a difference only in bulk between grandfather and the baby. Indeed, a shade of solemn expectation, now and then flitting across the faces of the younger members, had made them seem rather more thoughtful than their elders.

Now the spirit of fun reigned supreme. The very flames danced and capered in the polished grate. A pair of prim candles that had been staring at the astral lamp, began to wink at other candles far away in the mirrors. There was a long bell-rope suspended from the ceiling in the corner, made of glass beads, netted over a cord nearly as thick as your wrist. It generally hung in the shadow, and made no sign ; but to-night it twinkled from end to end. Its handle of crimson glass sent reckless dashes of red at the papered wall, turning its dainty blue stripes into purple. Passers-by halted to catch the merry laughter floating through curtain and sash, into the street, then skipped on their way with a startled consciousness, that the village was wide awake. At last, matters grew so uproarious, that the grandsire's red kerchief came down from his face with a jerk. What decent old gentleman could sleep in such a racket. Mynheer van Gleck regarded his children with astonishment. The baby even showed symptoms of hysterics. It was high time to attend to business. Mevrouw suggested, that, if they wished to see the good St. Nicholas, they should sing the same loving invitation that had brought him the year before. The baby stared, and thrust his fist into his mouth, as Mynheer put him down upon the floor. Soon he sat erect, and looked with a sweet scowl at the company. With his lace and embroideries, and his crown of blue ribbon and whalebone (for he was not quite past the tumbling age), he looked like the king of babies. The other children, each holding a pretty willow basket, formed at once in a ring, and moved slowly around the little fellow, lifting their eyes meanwhile ; for the saint to whom they were about to address themselves was yet in mysterious quarters. Mevrouw commenced playing softly upon the piano ; soon the voices rose—gentle youthful voices, rendered all the sweeter for their tremor—

" Welcome, friend. St. Nicholas, welcome.  
Bring no rod for us to-night.

While our voices bid thee welcome,  
Every heart with joy is light;

" Tell us every fault and failing ;  
We will bear thy keenest railing.  
So we sing, so we sing :  
Thou shalt tell us everything.

" Welcome, friend. St. Nicholas, welcome.  
Welcome to this merry band.  
Happy children greet thee, welcome.  
Thou art gladdening all the land.

" Fill each empty hand and basket ;  
'Tis thy little ones who ask it.  
So we sing, so we sing :  
Thou wilt bring us everything."

During the chorus, sundry glances, half in eagerness, half in dread, had been cast towards the polished folding doors. Now a loud knocking was heard. The circle was broken in an instant. Some of the little ones, with a strange mixture of fear and delight, pressed against their mother's knee. Grandfather bent forward, with his chin resting upon his hand ; grandmother lifted her spectacles ; Mynheer van Gleck, seated by the fire-place, slowly drew his meerschaum from his mouth ; while Hilda and the other children settled themselves beside him in an expectant group. The knocking was heard again.

" Come in," said Mevrouw softly.

The door slowly opened ; and St. Nicholas, in full array, stood before them. You could have heard a pin drop. Soon he spoke. What a mysterious majesty in his voice. What kindliness in his tones.

" Karel van Gleck, I am pleased to greet thee, and thy honored vrouw, Kathrine, and thy son, and his good vrouw, Annie.

" Children, I greet ye all—Hendrick, Hilda, Broom, Katy, Huygens and Lucretia. And thy cousins, Wolfert, Diedrich, Mayken, Voost and Katrina. Good children ye have been, in the main, since I last accosted ye. Diedrich was rude at the Haarlem fair last fall ; but he has tried to atone for it since. Mayken has failed, of late, in her lessons ; and too many sweets and trifles have gone to her lips, and too few stivers to her charity

box. Diedrich, I trust, will be a polite, manly boy for the future; and Mayken will endeavor to shine as a student. Let her remember, too, that economy and thrift are needed in the foundation of a worthy and generous life. Little Katy has been cruel to the cat more than once. St. Nicholas can hear the cat cry when its tail is pulled. I will forgive her, if she will remember from this hour that the smallest dumb creatures have feeling, and must not be abused."

As Katy burst into a frightened cry, the saint graciously remained silent until she was soothed.

"Master Broom," he resumed, "I warn thee that boys who are in the habit of putting snuff on the foot-stove of the school-mistress may one day be discovered, and receive a flogging"—(Master Broom colored and stared in great astonishment.)

"But, thou art such an excellent scholar, I shall make thee no further reproof.

"Thou, Hendrick, didst distinguish thyself in the archery match last spring, and hit the doel, though the bird was swung before it to unsteady thine eye. I give thee credit for excelling in manly sport and exercise; though I must not unduly countenance thy boat-racing, since it leaves thee too little time for thy proper studies.

"Lucretia and Hilda shall have a blessed sleep to-night. The consciousness of kindness to the poor, devotion in their souls, and cheerful, hearty obedience to household rule, will render them happy.

"With one and all I avow myself well content. Goodness, industry, benevolence, and thrift have prevailed in your midst. Therefore, my blessing upon you; and may the New Year find all treading the paths of obedience, wisdom and love. To-morrow you shall find more substantial proofs that I have been in your midst. Farewell."

With these words came a great shower of sugarplums upon a linen sheet spread out in front of the doors. A general scramble followed. The children fairly tumbled over each other in their eagerness to fill their baskets. Mevrouw held the baby down in their midst till the chubby little fists were filled. Then the bravest of the youngsters sprang up, and burst open the closed doors. In vain they peered into the mysterious department. St. Nicholas was nowhere to be seen.

Soon there was a general rush to another room, where stood a table, covered with the finest and whitest of linen damask. Each child, in a flutter of excitement, laid a shoe upon it. The door was then carefully locked, and its key hidden in the mother's bedroom. Next followed good night kisses, a grand family procession to the upper floor, merry farewells at bedroom doors and silence, at last, reigned in the Van Gleck mansion.

Early the next morning, the door was solemnly unlocked and opened in the presence of the assembled household; when, lo, a sight appeared proving St. Nicholas to be a saint of his word. Every shoe was filled to overflowing; and beside each stood many a colored pile. The table was heavy with its load of presents,—candies, toys, trinkets, books, and other articles. Every one had gifts, from grandfather down to the baby. Little Katy clapped her hands with glee, and vowed inwardly, that the cat should never know another moment's grief. Hendrick capered about the room, flourishing a superb bow and arrows over his head. Hilda laughed with delight as she opened a crimson box, and drew forth its glittering contents. The rest chuckled, and said, "Oh" and "Ah" over their treasures, very much as we did here in America on last Christmas day.

With her glittering necklace in her hands, and a pile of books in her arms, Hilda stole towards her parents, and held up her beaming face for a kiss. There was such an earnest tender look in her bright eyes, that her mother breathed a blessing as she leaned over her.

"I am delighted with this book; thank you, father," she said, touching the top one with her chin. "I shall read it all day long."

"Ay, sweetheart," said mynheer, "you cannot do better. There is no one like Father Cats. If my daughter learns his 'Moral Emblem' by heart, the mother and I may keep silent. The work you have there, the Emblem, is his best work. You will find it enriched with rare engravings from Van de Venne." (Considering that the back of the book was turned away, Mynheer certainly showed a surprising familiarity with an unopened volume presented by St. Nicholas. It was strange, too, that the saint should have found certain things made by the elder children, and had actually placed them upon the table, labeled with parents' and grand-parents' names. But all were too much absorbed in

happiness to notice slight inconsistencies. Hilda saw on her father's face the rapt expression he always wore when he spoke of Jacob Cats : so she put her armful of books upon the table, and resigned herself to listen.)

"Old Father Cats, my child, was a great poet, not a writer of plays, like the Englishman Shakespeare, who lived in his time. I have read them in German ; and very good they are,—very, very good,—but not like Father Cats's. Cats sees no daggers in the air : he has no white women falling in love with dusky Moors, no young folks sighing to be a lady's glove, no crazy princess mistaking respectable old gentlemen for rats. No, no. He writes only sense. It is great wisdom in little bundles,—a bundle for every day of your life. You can guide a State with Cats's poems ; and you can put a little baby to sleep with his pretty songs. He was one of the greatest men of Holland. When I take you to the Hague, I will show you the Kloosterkerk where he lies buried. There was a man for you to study, my sons. He was good through and through. What did he say,—

"O Lord, let me obtain this from thee,  
To live with patience, and to die with pleasure."

"Did patience mean folding his hands? No, he was a lawyer, statesman, ambassador, farmer, philosopher, historian, and poet. He was keeper of the Great Seal of Holland. He was a — Bah, there is too much noise here ; I cannot talk." And mynheer, looking with astonishment into the bowl of his meerschaum (for it had gone out) nodded to his vrouw, and left the apartment in great haste. The fact is, his discourse had been accompanied throughout with a subdued chorus of barking dogs, squeaking cats, and bleating lambs, to say nothing of a noisy ivory cricket, that the baby was whirling with infinite delight. At the last, little Huygens, taking advantage of the increasing loudness of mynheer's tones, had ventured a blast on his new trumpet ; and Wolfert had hastily attempted an accompaniment on the drum. This had brought matters to a crisis ; and well for the little creatures that it had. The saint had left no ticket for them to attend a lecture on Jacob Cats. It was not an appointed part of the ceremonies. Therefore, when the youngsters saw that the mother looked neither frightened nor offended, they gathered new courage. The grand chorus rose triumphant ; and frolic and joy reigned supreme.

Good St. Nicholas. For the sake of the young Hollanders, I for one, am willing to acknowledge him, and defend his reality against all unbelievers. Carl Schummel was quite busy during that day, assuring little children confidentially, that not St. Nicholas, but their own fathers and mothers, had produced the oracle, and loaded the tables. But *we* know better than that.—*From Hans Brinker or The Silver Skates.*

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### CHRISTMAS WORK.

In our zeal to conform to the notion that the child should follow the development of the race from the remotest past down to the present time, we must not forget that the child knows comparatively little of his own time. Indeed, it is very little actual interpretation of the life of the old Aryan, Persian, or Greek people he can make when his eyes and attention have hardly seen (in the best sense of that word) his own neighborhood.

The child should be able to understand a little of the nature of the complex life of which he is a part. Indeed, it is his right. Any notion of primary history that omits this, leaves out the key itself for further interpretation. It is for this reason that special work is suggested for Thanksgiving, Christmas, February 12 and 22, March 4, and May 30. The mere mechanical part of the primary reading can be done as well on subject matter drawn from these historical sources as from any other. In fact, because of the added interest in the stories, the mere recognition of word forms is made easier. Each teacher can use her own way of teaching the words involved, but if she looks forward to such work she will find opportunities for introducing many of the words needed before she is ready for the complete lesson.

The Christmas work ought to embody as much happiness, peace and good-will as can well be put into any month's work. Many phases of busy work can be used, such as drawing or cutting all sorts of toys—drums, tops, balls, books, dolls, dishes, mittens, stockings, etc. In many primary schools the children make little presents to give to some member of the family. They must see that the inherent idea in Christmas is giving.

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“We are richer for what we give;  
And only by giving we live.” —*Lucy Larcom.*

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**LEND A HAND.**

(This department is conducted by Mrs. E. E. Olcott.)

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*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

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**CHRISTMAS GIVING.**

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Problems for the Christmas season?

Yes, difficult, delicate problems that frequently defy satisfactory solution.

In the kindergarten, Christmas is the time when the Christ child becomes the golden thread that gleams in occupations and games; when lessons of His love and life are graven upon impressionable hearts.

In some primary schools also the thought that Christmas is Christ's birthday is freely used in song and story. Copies of beautiful pictures of "The Nativity" or of "The Madonna and Child," are brought to school, and "On earth peace, good will toward men," is skilfully emphasized.

How shall we teach "Good will toward men" so that it shall bear fruit in loving and giving? How shall we foster unselfishness and gratitude?

In every public school the rich and the poor meet together, why should not the one give of his abundance to the other? Would not this make the rich generous, the poor grateful, and thus form a bond of friendliness between them? It *should* do so. It *does* so, always—in theory; many times, in reality. In a certain school the hours were from 9 o'clock till 1:30. The pupils were expected to eat a lunch at noon at "the long" recess." Some had no lunch to bring. So in her room, Miss Grace skilfully brought it about that all lunches should be shared. She noted the pleasure with which some of the children brought an extra apple or cake, and felt glad, gratified, satisfied.

One day Eloise, who brought dainty lunches from her elegant home, made a request: "Miss Grace, mamma says will you please decide which one of those poor children who can't afford lunch, shall have part of mine. They like my lunches so much that they beg it nearly all from me, and there is hardly enough left for myself."

"It would be better, Eloise, for you to invite just one class-mate—a different one each day—to share your lunch."

Miss Grace was no longer satisfied. Her eyes grew keener at the long recess. She saw that some who used to bring lunch, did so no longer, preferring to receive a portion from others. One day noticing a clouded face, she called the child to her desk. "Have you shared your lunch with some one, Mary?"

"No ma'am," half sullenly.

"Don't you wish to," came encouragingly.

"Nobody won't eat with me, they peep into my basket and say they'd rather eat with somebody else. Mamma says she can't give me cakes or oranges every day."

Miss Grace wondered why Gwen did not eat her lunch. The child was evidently very poor, yet she always brought a neatly tied lunch box which she never opened. "You would better eat something," she suggested kindly. But Gwen shyly shook her head and continued drawing pictures. The next day Miss Grace was sure that Gwen glanced hungrily at a sandwich. "Eat a little to please me," she said kindly but firmly, beginning to untie Gwen's lunch box. A look of distress swept over the child's face, and her pleading "Oh, please don't!" staid the teacher's fingers.

She quietly led Gwen to the cloak room, and there found that the lunch box contained only pebbles—to give weight—wrapped in pieces of cloth so they would make no noise.

"Do you bring this every day, dear?" she asked tenderly.

"Yes ma'am," sobbed the child, "mamma hasn't any lunch to give me."

"Why don't you eat with some of the others?" she ventured very, very, tenderly.

"I—I—don't want to."

"Elsie ate with Mary one day when she could not bring anything."

"Yes, but Elsie could 'vide with Mary some other day, and I can't."

Defly but silently Miss Grace tied up the lunch box again, and with her own soft handkerchief wiped away Gwen's tears.

Returning with her to the school room she said pleasantly, "I have excused Gwen from eating lunch to-day."

Gwen waited after school. "I need some one every morning



to help me get the busy work ready for the monitors," Miss Grace explained, "Will you please ask your mamma if she can spare you to come ten minutes early each day to be my little assistant?" There will always be a box of lunch for you on the shelf but no one in school shall know it except you and me.

Miss Grace and Miss Wise were talking over the matter of giving to the needy.

"It's a problem I can't solve," said Miss Wise, "yet I dare not give it up. There are so many of my pupils who are so wretchedly poor. My heart aches to see them shiver in the December blast. Often a rent in their thin cotton stockings shows that no other cover protects their poor little limbs, and sometimes bare toes peep from ragged shoes. It has been a labor of love to secure contributions of clothing for the poor little things. But I've had misgivings of late that perhaps I've been wise in name only. Perhaps I've wronged some of the children by breaking down honest pride and tempting them to be beggars. I've had glimpses of a spirit of 'I thank Thee that I am not as other men are' on the part of those who give liberally, and of 'You've got so much you *ought* to give *me* some,' among the needy. I have overheard some scraps of conversation that have troubled me. Ethel said 'Who are you going to give your old toys to this Christmas? I thought I'd give my doll to Elsie, she is the cleanest of those slum children.' 'I think I'll give my old picture book to Annie, its dreadfully soiled and torn but its good enough for her, you know,' replied Alice. 'Mamma said she would rather I would give my pennies to the Homely Friendless' (Home of the Friendless), put in little Ruth, 'she said maybe the little children in school wouldn't like my throwed-away things.' I heard John say sneeringly, 'You *must* be poor, if your dad can't give you a penny.' 'I'm toler'ble poor,' said little Joe sturdily, 'my paw s'pports us, folks don't have to give us nothin.' That same day Jim came to me with 'Paw said if somebody'd give us chil'ern some shoes, he'd have money enough to take us to the the-ay-ter Saturday night. You haint got no shoes 'at would fit us, have ye?' "

I've wondered whether the thought may not cross Joe's mind that if 'folks would give him things' his father would have money for the the-ay-ter too. If so, then have not my gifts been a temptation to Joe?

We poor frail humanity ! When we would do good, evil is present with us ! I feel in my heart, that what those little waifs need most, is to *give* something to others. I'm studying, studying how to reach that end."

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What have these incidents to do with Christmas giving? A great deal. Merry Christmas is coming when "good will toward men" should make hearts light and loving. How shall it bring the greatest good and gladness to school? In the kindergarten where pupils' eager fingers fashion the gifts under the kindergarten's kindly eye, all are on equal footing, and there are no thorns among the Christmas roses. But in the grades it is different. How shall the pupils show "Good will toward men?" Some of the elements of the problem stare us uncompromisingly in the face.

a. The rich should give to the poor with no touch of purse-pride in the one or pauperism in the other.

b. The bare bread that father earns should be sweeter than bread and butter, and honey from the hand of charity.

c. Those who have an abundance of butter and honey should for their soul's good share it with others.

Question: How shall the butter and honey be given so that it shall bring blessings to both? How be given as from friend to friend? Or better, how given as the younger brothers and sisters of that elder Brother who gave the commandment, "Thou shalt love thy neighbor as thyself?"

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## DESK WORK.

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### AN ANECDOTE OF LOUISA ALCOTT.

[A REPRODUCTION STORY]

When Miss Alcott was a little girl, her father's income was so small that very plain simple food had to supply the family table.

There was a lady who was very fond of little Louisa. This lady boarded at a large hotel. Her health was so poor that she had to be very careful of her diet. So she used to save delicious cake, fruit and nuts which she could not enjoy and give them to her little friend. Louisa came frequently to the hotel and carried

the dainties home in a bandbox. Then she and her little sisters would have a feast. The lady seemed to them like a kind fairy.

Years afterward when the girl had become the rich and famous Louisa M. Alcott, she met this friend, now an old lady, and greeted her very affectionately. Her old friend was delighted and exclaimed in pleased surprise, "Why, I did not think you would remember me!"

Miss Alcott replied quickly and cordially, "Do you think I could ever forget that bandbox?"

#### A SPELLING LESSON.

The direction written on the board was: Add *ing* and *ed* (when admissible) to the following words: hope, hop, write, etc.

Below is a list, that was marked 100 per cent., and which was afterward written from dictation by the class.

hope	hoping	hoped
hop	hopping	hopped
write	writing	_____
dye	dyeing	dyed
die	dying	died
fly	flying	_____
dry	drying	dried
step	stepping	stepped
slave	slaving	slaved
shut	shutting	_____

#### A PAGE FROM SPEER'S PRIMARY ARITHMETIC

Relative Magnitude.—Give each pupil a square inch and an oblong 2 in. by 1 in. and another 3 in. by 1 in.



1. What is the length of the square rectangle? How long is the largest rectangle? What is the length of the other rectangle?

2. Show me the rectangle 2 in. by 1 in. The rectangle 3 in. by 1 in. Point to each rectangle and describe it.

Ex. : This is a square rectangle 1 in. long.

3. Call the largest rectangle B, the smallest O, and the other N. Show me O. Show me B. Show me N.

4. N is as large as how many O's? What part of N equals O? N equals how many times O? O equals what part of N?

5. B is as large as how many O's? B equals how many times O? Show me  $\frac{1}{2}$  of N. B is how many times as large as  $\frac{1}{2}$  of N?

6. If we call O  $\frac{1}{2}$ , what is N? What is B?

7. Cut rectangles equal to O, N, and B.—*Speer's Primary Arithmetic, Ginn & Co.*

## CHRISTMAS PROGRAM.

[Select a committee of boys and girls to decorate the school room. The committee should use such materials as can readily be found in the neighborhood. Use evergreens if they can be secured, bitter-sweet berries, leaves, grasses and cotton-batting. Place upon the blackboard in an artistic manner the following or similar selections: "Merry Christmas," "On Earth Peace, Good Will Toward Men," "Behold I Bring You Good Tidings."]

### I. SONG..... Air—Tramp, Tramp

#### 1.

When the summer time is passed, and the harvest housed at last,  
And the woods are standing bare and brown and sere;  
When the frost is sharp at night, and the days are short and bright,  
Comes the gladdest, merriest time of all the year.

#### Chorus.

Shout, O shout the joyous welcome!

Greet old Christmas with a roar;

He has met us with good cheer for this many a merry year,

And we hope he'll meet us all for many more.

[Repeat.]

#### 2.

Then away with every cloud that our pleasure might enshroud,  
And away with every look and word unkind;  
Let old quarrels all be healed, and old friendships closer sealed,  
And our lives with sweeter, purer ties entwined.—Chorus.

#### 3.

Since we know the blessed power of the happy Christmas hour,  
We will keep its holy spell upon our heart,  
That each evil thing within that would tempt us into sin  
May forever from our peaceful souls depart.—Chorus.

—From S. C. Hanson's *Merry Songs*.

### 2. READING..... Papa's Birthday Present

"What shall we give papa on his birthday?" mamma said. Babykins patted himself. "I am quite sure that there is nothing in all this world that

he would like better than you," said mamma. "I think I will get him such a big scrap basket that he can keep all his waste papers in it, and then I will put you in it when I give it to him. What do you think of that plan, Babykins?" Babykins kissed mamma, and seemed very happy. Mamma found a scrap basket which was large enough to put Babykins in and shut down the cover so that not one of his curls should be seen, and when papa's birthday came she carried the basket down to the breakfast table and put Babykins in it. "O, what a nice basket," said papa. "What is it filled with?" "It is full of mischief," mamma said; and just then papa opened the basket and found mischievous little Babykins laughing at him.—*Babyland*.

### 3. RECITATION.....Old Christmas

Now who knows old Christmas,  
 He knows a carle of worth,  
 For he is as good a fellow  
 As any upon earth.

He comes well cloaked and coated,  
 And buttoned up to his chin,  
 And as soon as he comes a-nigh the door  
 We open and let him in.

And after the little children,  
 He asks in a cheerful tone,  
 Jack, Kate, and little Annie—  
 He remembers them every one.

With a present for every servant,  
 For in giving he doth not tire;  
 From the red-faced, jovial butler,  
 To the girl by the kitchen fire.

O he is a kind old fellow,  
 For though the beef be dear,  
 He giveth the parish paupers  
 A good dinner once a year!

Good luck unto old Christmas,  
 And long life let us sing,  
 For he doeth more good unto the poor  
 Than many a crowned king.

—*Robert Herrick*.

### 4. ESSAY.....Christmas Customs

### 5. RECITATION.....Two Little Stockings

Two little stockings hung side by side  
 Close to the fireplace, broad and wide.  
 "Two?" said Saint Nick, as down he came,  
 Loaded with toys and many a game,

"Ho! Ho!" said he with a laugh of fun.  
 "I'll have no cheating, my pretty one;  
 "I know who dwells in this house, my dear;  
 "There is only one little girl lives here."  
 So he crept up close to the chimney-place  
 And measured a sock with a sober face.  
 Just then a wee little note fell out,  
 And fluttered low like a bird about.  
 "Aha! what's this?" said he in surprise;  
 And he pushed his specs up close to his eyes,  
 And read the address, in a child's rough plan:  
 "Dear Saint Nicholas," so it began,  
 "The other stocking you see on the wall  
 "Is hung for a child, named Clara Hall,  
 "She's a poor little girl, but very good,  
 "So I thought, perhaps, you kindly would  
 "Fill her stocking, too, to-night,  
 "And help to make her Christmas bright.  
 "If you've not enough for both stockings there,  
 "Please put all in Clara's, I shall not care."  
 Saint Nicholas brushed a tear from his eye,  
 "God bless you, darling;" he said with a sigh;  
 Then, softly he blew through the chimney high,  
 When down came two of the funniest mortals  
 That ever were seen this side of earth's portals;  
 "Hurry up," said Saint Nick, "and nicely prepare  
 "All a little girl wants where money is rare."  
 Then, oh, what a scene there was in that room!  
 Away went the elfs, but down from the gloom  
 Of the sooty old chimney came tumbling low  
 A child's whole wardrobe, from head to toe.  
 How Santa Claus laughed, as he gathered them in  
 And fastened each one to the sock with a pin!  
 When all the warm clothes were fastened on,  
 And both little socks were filled and done,  
 Then Santa Claus tucked a toy here and there,  
 And hurried away to the frosty air,  
 Saying, "God pity the poor and bless the dear child  
 "Who pities them, too, on this night so wild."

—Selected.

## 6. READING.....An Eastern Legend

There's a tender Eastern legend,  
 In a volume old and rare,  
 Of the Christ child in his garden  
 Walking with the children there.  
 And it tells this strange, sweet story—  
 (True or false, ah, who shall say?)

How a bird with broken pinion  
 Dead within the garden lay.  
 And the children, childish cruel,  
 Lifted it by shattered wing,  
 Shouting, "Make us merry music,  
 Sing, you lazy fellow, sing."  
 But the Christ child bent above it,  
 Took it in his gentle hand,  
 Full of pity for the suffering  
 He alone could understand.  
 Whispered to it—oh, so softly!  
 Laid his lips upon its throat,  
 And the song-life, swift returning,  
 Sounded out in one glad note.  
 Then away on wings unwearied,  
 Joyously it sang and soared,  
 And the little children kneeling  
 Called the Christ child "Master—Lord."  
*—Gracie Duffield Goodwin, in Our Dumb Animals.*

7. RECITATION.....Santa's Plan

"Neat Mrs. Santa Claus sat slowly rocking,  
 Thinking the while, as she darned Santa's stocking,  
 'What a kind fellow he is, to be sure;  
 Out in the cold on his long Christmas tour,  
 Filling the stockings quite up to the knees,  
 Loading with presents the bright Christmas trees.'

"So she sat thinking till, lo and behold!  
 In came old Santa Claus, out of the cold;  
 Shook off his overcoat, threw down his cap,  
 Took young Kris Kringle right up in his lap,  
 Saying, 'I'll tell you if you wish to know,  
 All that I saw on the world down below.

"Up in the clouds sat the old moon and I—  
 All the young stars were alight in the sky—  
 They winked and they blinked with a murmuring noise,  
 Just like the laughter of gay girls and boys;  
 So we peeped down from the fleecy cloud-rifts,  
 And in the meantime I shook out the gifts.

"Sledges and carriages, French dolls and wax,  
 Some having real hair, and some having flax;  
 Into the houses they scattered, pell mell,  
 Making more merriment than you can tell;  
 But the sad part of the story is this,  
 That the *rich* folks got the *most*—little Kris.

"Just where the lights burned the brightest, they'd fall;  
 'Sambo' would gather them up one and all—

While the poor little folks looked on at the sight  
 Now, dear Kris Kringle, do you think that was right?  
 Can't we arrange a new plan so, my dear,  
 That things can be managed more justly, next year?"'

# CHRISTMAS THOUGHTS :—

[For separate pupils.]

8. At Christmas play and make good cheer,  
 For Christmas comes but once a year.—*Tusser.*
9. I heard the bells on Christmas day  
 Their old familiar carols play,  
 And wild and sweet  
 The words repeat,  
 Of "Peace on earth, goodwill to men."—*Longfellow.*
10. Be merry all, be merry all,  
 With holly dress the festive hall;  
 Prepare the song, the feast, the ball,  
 To welcome merry Christmas!—*H. R. Spencer.*
11. Awake, glad heart! get up and sing!  
 It is the birthday of the King.—*Vaughn.*
12. The world is happy, the world is wide,  
 Kind hearts are beating on every side.—*Lowell.*
13. God bless us every one!—*Dickens.*
14. Hang up the vine and holly,  
 Sign the cross over the door,  
 That joy coming in with Christmas  
 May go from the place nevermore.  
 To-day the Christ child reigneth,  
 In might of love alone,  
 A crowned and sceptered monarch,  
 And every heart his throne.
15. The wrong shall fail,  
 The right prevail,  
 With "Peace on earth, goodwill to men."
16. There's a song in the air,  
 There's a star in the sky,  
 There's a mother's low prayer,  
 And a baby's low cry.  
 And the star rains its fire,  
 While the beautiful sing,  
 And the manger in Bethlehem  
 Cradles a king.—*J. G. Holland.*

17. I have always thought of Christmas time as a good time; a kind, forgiving, charitable, pleasant time.—*Dickens.*



18. Not what we give but what we share,  
The gift without the giver is bare.  
He gives but worthless gold  
Who gives from a sense of duty.—*Lowell.*
19. Who gives to whom hath naught been given,  
His gift in need, though small in deed,  
As is the grass-blade's wind-blown seed,  
Is large as earth and rich as heaven.—*Whittier.*
20. The yearly course that brings this day about  
Shall never see it but a holiday.—*Shakespeare.*
21. It is his birthday—his, the only One  
Who ever made life's meaning wholly plain;  
Dawn is he to our night! No longer vain  
And purposeless our onward struggling years;  
The hope he bringeth overflows our fears—  
Now do we know the Father through the Son?  
O earth, O heart, be glad on this glad morn!  
God is with man! Life, life to us is born!

—*Lucy Larcom.*

[For additional material, see December JOURNALS of previous years. We still have on hand a few copies of December 1895 JOURNAL, containing the play entitled "The Conquest of Santa Claus," which we will send to any one who wishes it for 10 cents.]

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## EDITORIAL.

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### ARBOR DAY.

The observance of Arbor Day was quite general and thousands of trees have been planted. In no former year has the observance of this day been so general.

State Superintendent Geeting requested superintendents and teachers to have the children vote their choice of a shade tree, and then send him a report of the day's work, the number of trees planted, the votes cast for each variety of tree, etc. In answer to this request, he has received hundreds of reports. Owing to the drouth and consequent bad condition of the ground, the tree-planting was in many instances postponed, and thus delay was caused in many of the reports.

On November 15, Superintendent Geeting made the following statement in regard to the vote for a State tree.

"At noon to-day, Nov. 15, 1897, 15,653 votes have been reported on "State Tree" as follows:—Maple 7604, oak 3506, cedar 762, elm 641, chestnut 549, walnut 422, hickory 374, apple 352, beech 346, poplar 273, ash 217, pine 149, peach 62, sycamore 64, willow 58, cherry 44; with 230 scattering. The maple received more than twice as many votes as the next highest—the oak—and almost one-half of all the votes cast, and is, therefore, the most

popular tree with the 16,000 children voting; and by a careful analysis of the vote by districts, so far as heard from, it is certainly the favorite of a majority of all the school children of the State

"As a result of this vote, then, we announce that the "maple tree" is the most popular shade tree in the State, and will be considered the "State tree" until after Arbor Day next year. We want fifty to one hundred thousand children to vote next year, so that the actual sentiment can be more accurately announced. The final result will not be announced until next year, when more children have had an opportunity of taking part in the decision."

The writer was in the Superintendent's office and learned that *forty* more reports reached the office the day after the above statement was compiled.

Wm. Watson Woollen, of Indianapolis, recently published in the *Indianapolis News* an interesting and instructive article on Arbor Day in which he says:—

"My contribution to Arbor Day is a plea for a merciful treatment of the trees. They, like ourselves, are living things. They have organs by which they breathe, perspire, take in food, digest it and carry it, when digested, to all their parts. It is thus that their growth is promoted and they are brought to a state of perfection. Arbor Day is a good thing because it calls attention to these facts and impresses them upon our minds."

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#### "THE FALLACY OF DISCIPLINE."

This is the title of an article on another page, by Arnold Tompkins. It criticises one of the model lessons given in the State Course of Study. It has always been the policy of THE JOURNAL to encourage the freest possible discussion of principles and methods and to discourage as far as possible all personalities. This article has to do with a principle or rather a method in teaching. The *verbatim* report of a lesson given in the State Normal school is printed in this State course of Study as a model for the teachers of the State to follow.

Arnold Tompkins is certainly high authority on a question of this kind, and in his opinion the lesson is bad and will have a tendency to do much harm. Others who stand high as educational critics have expressed the same opinion of these model lessons.

THE JOURNAL will not at this time express its opinion as to the merits of the lessons or the justice of the criticism, but will content itself with saying, that if the lessons are all right, no amount of fair criticism will hurt them, and Prof. Tompkins's article will only serve to call attention to them and make them more useful. And on the other hand if they are faulty as Prof. Tompkins thinks, they ought to be criticised.

The lessons are now the property of the State, and as a public document, they may be discussed solely on their merits without reference to their origin.

If this criticism has done injustice to these lessons (the one taken is similar to most of the others) the pages of THE JOURNAL will be open to any

one wishing to make reply, or to state a different view. The only condition imposed is that nothing personal must enter the discussion. The *truth* is what the readers of THE JOURNAL want.

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DR. E. A. SHELDON.

Dr. Edward A. Sheldon, the venerable president of the Oswego Normal school, recently died at the advanced age of 75 years. He founded the school of which he was the honored principal in 1861, and it became a State Normal in 1866. For many years the Oswego Normal was the most noted in the United States and it attracted students from every section of the country.

At a memorial service in honor of Dr. Sheldon held in the college auditorium, Lewis H. Jones, of Cleveland, O., a graduate of the school, made an address in which he said :

"It is not often that it is given to one man to originate a system of education, to embody it in an institution, and to live to see that institution through its beneficent influence permeate the entire life of a nation. It has been the fate of most reformers to die before the cry of victory has rung in their ears. Dr. Sheldon had the rare felicity to enjoy a long and peaceful career of unabated prosperity for the cause of his heart, and to die without a question as to its future. With his death, the sceptre passes into no untried hands. Enemies there have been but they have been vanquished by being converted into friends ; and so as time goes on the cause gathers about it an ever-increasing multitude."

Dr. Sheldon was not only a great educator but a great man. He was held in the highest regard by those who knew him best.

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COMPLIMENTARY TO W. L. BRYAN.

If the Pedagogical Conference had afforded nothing more than the opportunity to listen to nine lectures from Prof. W. L. Bryan, of the State University of Indiana, the teachers of Ohio would be indebted to Pres. Canfield and Dr. Gordy for bringing to their attention something of rare value. The pleasure of listening to a man with no ax to grind, with no pet theory to establish ; a man not conservative enough to have gone to seed, nor radical enough to be just sprouting, with real literary ability and winning personality, will never be forgotten. So many writers and speakers on "Child-Study" are so provokingly dogmatic or so amusingly absurd that they have a tendency to lead healthy minds to undervalue much formal work in this line. But here was an honest, earnest, modest investigator holding us almost entranced with the results of his investigations.—*Ex.*

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LETTER WRITING

Some months ago State Superintendent Geeting announced that he would send a copy of the constitution of Indiana to any student in the schools who would write him a letter asking for it, and enclosing postage. This brought him hundreds of letters from all parts of the State. The

writer spent some time in looking over these letters and was interested in noting the differences in them, even in those from the same grades.

Some were concise and others were verbose. Some were in excellent form, while others lacked form. Some were written in pencil. A few were written on scraps of paper and leaves out of blank books. But upon the whole they were well written, well spelled, well punctuated and in good form, showing that teachers generally are giving attention to this very practical phase of education. It is worth a good deal to *any body* to be able to write a letter in good form and express it in good English. Pupils should be taught that it is hardly excusable in a person to write a letter to any one, much less a stranger, in pencil, or on a scrap of paper. Proper form and neatness should be insisted upon.

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THIS issue of the JOURNAL gives much space to Christmas exercises. Special attention is called to the supplementary reading in the advertising department.

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ESPECIAL attention is called to Sanford Bell's article, on another page, on the subject of "Child Study." It is certainly one of the most practical yet published on this subject. Prof. Bell will give the readers of the JOURNAL other articles along this line.

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AS USUAL, a majority of the counties in the State held their county associations on Friday and Saturday following Thanksgiving. We have been favored with the printed programs of most of them and have taken pleasure in looking them over. We regret that we cannot find space in the JOURNAL to make notice of each one.

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THE Compulsory Education Law was fully discussed at the late city superintendents' meeting and it was gratifying to note that the law was uniformly commended. It has increased the attendance in most cities and generally without any harsh means being employed. Moderation was advised and little trouble is anticipated. The law requires that the child shall attend school twelve consecutive weeks in the year, and it is held that the law contemplates the first twelve and not the last twelve. If he goes the first twelve he can start with classes at the beginning of subjects and the time will be worth much more than the same time later in the year.

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THE program for the forth-coming State Teachers' Association printed this month is certainly a good one. It gives a good variety of subjects and those selected to discuss them are persons of experience and ability. The professional interest of not less than one thousand Indiana teachers should prompt their attendance on this meeting. The annual address by William Hawley Smith, the author of "Dodd Weaver," is a feature which will attract many. Mr. Smith's common-sense educational views are in demand. The editor has omitted from the program extended directions to teachers as to how to buy railroad tickets in order to secure reduced rates returning. The

arrangements are just what they have been for years and years and teachers ought to know them by this time. Two things are essential: (1) Each teacher must secure a certificate from his home agent that he has paid full fare to Indianapolis, and (2) the certificate must be presented to the railroad secretary of the Association. Attend to this matter early in the session "and avoid the rush."

THE Supreme Court has rendered a decision in regard to the Blackford County superintendency contest. It will be remembered that in this county there are only four township trustees and this year they are evenly divided politically. The county auditor favored a change, so the two trustees that preferred the old incumbent refused to meet on the day appointed to elect a county superintendent. The following points made by the Supreme Court will be of interest: (1) Part of the township trustees of a county may properly, by mandate, compel the others to meet with them for the election of a county superintendent, where such others have willfully absented themselves at the time fixed by statute for such election with the purpose of preventing the attendance of a quorum. (2) A writ of mandate will issue to compel the performance by a public officer of a duty which the statute imperatively enjoins upon him. (3) A county superintendent may properly be chosen on another day as reasonably soon after the first Monday in June as is practicable, where no election was held on that day. (4) Section 2018, R. S., 1881, prescribing punishment by fine and imprisonment for public officers who refuse to perform their duties, applies to trustees who refuse to assist at the election of a county superintendent, or who refuse to do other acts commanded by statute. Under this decision the trustees met, and with the vote of the auditor elected Finley Geiger. This election is being contested on technical points, but the auditor has reported the new man to the State superintendent and he will be recognized as the legal superintendent till the court decides to the contrary.

REPORT OF THE COMMISSIONER OF EDUCATION.—The first volume of the Report of the Commissioner of Education for 1895-96 is at hand. A large part of it is devoted to libraries and library legislation in the United States. Half the states in the union have passed new laws for the encouragement of libraries during the last few years, and the growth of libraries has been correspondingly great. Interesting details are given of recent educational developments in Great Britain, central Europe, France, Mexico and Central America. The chapter on music in German schools sketches the history of singing in German schools, gives details of methods of teaching in American and German schools, and discusses the value of folk-songs. The most unique feature of the volume is a translation of a Jewish primer used in the Jewish schools two thousand years ago. It is an elaborate mystical interpretation of the letters of the alphabet which gives them a spiritual sense. This the Commissioner regards as an interesting illustration of the alertness of nations to preserve their national spirit, since it shows how the people charged with the task of finding and making manifest the spiritual sense of nature nurtured in their children the disposition to search for this.

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## QUESTIONS AND ANSWERS.

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### STATE BOARD QUESTIONS USED IN OCTOBER.

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#### SCIENTIFIC TEMPERANCE.

1. *In which of the two sexes are the evil effects of the use of alcohol most marked?*

The evil effects of alcoholic stimulants are not more marked in one sex than in the other, other features remaining the same. A delicate or sensitive nervous organization, an unhealthful state of the blood, a tendency towards insanity, weakness of will power, and the leading of a sedentary life are conditions favorable for the bringing about of marked evil effects of alcoholic stimulants upon the human system.

2. *What are some of the physical infirmities transmitted to their offspring by the habitually intemperate?*

A condition of the system which creates a desire for drink; a nervous organization imperfect and diseased; and a condition of the tissue tending towards scrofula or fatty degeneration.

3. *What is the effect of alcohol upon the vaso-motor system?*

Alcohol taken into the system effects rapid changes upon nervous tissue, especially the cellular. The vaso-motor center, which presides over, animates, and regulates the vaso-motor system, through impaired cell nutrition and the coagulating influence of the alcohol, acts very imperfectly. The action of the heart is disturbed, the pulsations are for a time, increased, and the capillaries are relaxed. This abnormal accumulation of blood in the skin and the nerve centers deprives other areas of their proper share.

4. *Is tobacco in any sense a food? Illustrate.*

A food is a substance which can be taken into the system and transformed into nutritive material capable of being assimilated by the tissues; such as bread, meat, milk, etc. In no sense can tobacco come into this list; it is not taken into the stomach; and that part of tobacco which gets into the system by the absorption of moisture from the mucous lining of the mouth is not transformed into nutritive material, nor is it capable of being so transformed.

5. *How do the injurious effects of opium smoking compare with those resulting from hypodermic injections of morphia?*

The hypodermic method of taking morphia is the most dangerous, both immediately and remotely. The opium smoking method is less injurious than any other form of the opium habit.

6. *Why is the smoking of the cigarette more injurious than the smoking of the ordinary cigar?*

Because of the large quantity of smoke taken into the lungs, and with it that hurtful element, carbonic oxide; also, on account of the adulteration of the tobacco.

## GRAMMAR.

1. Write the following words in two columns; in one column write the singular, and in the other the plural: *Wife, strife, quarto, canto, cliff, box, ox, 6, sky, monkey, Mr. Trust, Miss Swift, Mrs. South.*

## Singular.

## Plural.

6

6's

Mr. Trust

Mr. Trusts

Miss Swift

Miss Swifts, or Misses Swift

Mrs. South

Mrs. Souths

2. State and illustrate the uses of the conjunction in the sentence.

Co-ordinate conjunctions are used to join elements of similar ranks; as—(a) words—John *and* James, bold *or* courageous, etc.; (b) phrases—on the hillside *and* in the valley; (c) clauses—I go *but* I will come again.

Subordinate conjunctions are used to join clauses of a different rank; as "He studies that he may learn." "That" is sometimes used to introduce a sentence; as, "That he should steal is surprising." In such a sentence, *that* is sometimes called an *introducing* conjunction.

3. Use the words, *learn* and *teach*, in sentences showing the contrast in their meaning.

(a) "Teach me Thy ways, O Lord." (b) "Cease to do evil and learn to do well." *To teach* is to *give* instruction; *to learn* is to *receive* instruction. The parent teaches the child good manners; the child learns good manners.

4. What is the difference between "Language Lessons" and "Grammar"?

Strictly speaking *language lessons* is the general term and *grammar* the subordinate term. Lessons in grammar, in rhetoric, in composition, (with the usual meaning attributed to the terms) are all lessons in language.

Some give to the term *grammar* a meaning broad enough to place it on an equality with the term *language*. Strictly speaking the object of *language lessons* is to give the pupil power of expression spoken and written; and *grammar* is the science of the sentence.

5. Explain the use of each word in the following sentence: *Having been much afflicted himself, he founded a hospital for the afflicted.*

"*Himself*" is in the nominative case, absolute, before the participle "having been afflicted." "*Having been afflicted*" is a perfect passive participle, used as adjective modifying "*himself*;" it is also a compound participle, being made up of three participles. "*Much*" is an adverb, modifying "*afflicted*." "*Afflicted*," (the last word in the sentence) is a verbal adjective used substantively, as the object of the preposition "for."

6. Illustrate five uses of the infinitive in sentences. Tell how each infinitive is used.

An infinitive may be used as; (a) a subject nominative; as, "To steal is base;" (b) a predicate nominative; as, "To know her was to love her;" (c) an appositive nominative; as, "His duty, *to count* the sacks, was

quickly done ; (d) as direct object ; as, "She loves to sing ;" (e) as an adjective ; as, "Time to come is called future ;" (f) as an adverb ; as, "To go to law to plague a neighbor is unbecoming."

#### PHYSIOLOGY.

1. *At what age is there the most animal matter in the bone? The most mineral?*

In childhood, the proportion of animal matter in the bones is greater than at any other time. In old age the proportion of mineral matter in the bones is greater than at any other time.

2. *What relation do the muscles and bones of the body bear to one another?*

The bones serve as firm, solid bars, or as levers, for the attachment of the muscles. The bones serve as the frame work which the muscles clothe for protection, beauty and power.

3. *Describe the process of absorption by means of the lacteals and lymphatics.*

The albuminose and glucose that have escaped through the pyloric orifice, the glucose made in the small intestine, and the emulsion are absorbed by the lacteals and the intestinal veins. The latter absorbed the less portion and convey it into the portal vein. The lacteals absorb the greater portion and convey it into the thoracic duct.

The lymphatics, aided by the capillaries, absorb the refuse blood and the worn-out tissue found throughout the system and convey their contents through the lymphatic glands, and on to where the lymphatics terminate in their two trunks. The greater portion is received by the thoracic duct ; the rest is received by the lymphatic duct.

4. *Describe the red and white corpuscles of the blood. What function does each perform?*

The red corpuscles are circular disks about  $\frac{1}{1000}$  of an inch in diameter, and double concave in shape ; they are soft, flexible, and elastic, readily squeezing through openings and passages narrower than their own diameter, then at once resuming their own shape. They are so small that more than ten millions of them will lie on a surface one inch square. The white corpuscles are larger than the red, their average diameter being about  $\frac{1}{100}$  of an inch. They are of irregular shape, and spontaneously undergo active, and very curious changes of form, resembling those of the amoeba, a very minute organism found in stagnant water. The chief function of the red corpuscles is to carry oxygen to all parts of the body. The chief functions of the white corpuscles are to destroy foreign particles present in the blood and to remove dead and broken down tissues.

5. *Describe the mechanical movements of breathing.*

See text book.

6. *Describe in a general way the structure of the skin.*

The skin is the covering of the body and is continuous with the lining (mucous membrane) of the alimentary canal. It is separable into two



general layers: (a) The *scarf skin*, or cuticle. (b) The *true skin*, or corium, separable into an external papillary layer, and an internal fibrous layer.

7 and 8. See text books.

9. *Name three great organs of excretion and tell how each is related to the others.*

The three great organs of excretion are the skin, the lungs, and the kidneys. All these are blood purifying organs. The skin is continuous with the delicate inside lining of the lungs. Both are organs of respiration. Both the skin and the kidneys excrete organic and saline matter.

10. *How would you introduce the subject of physiology to a class beginning its study?*

By calling attention to the more familiar processes of motion and of nutrition and to the exact adaptation of the organs to their functions. Such an introduction would excite wonder and interest whereby a beginning of the study of the subject could be easily made.

#### SCIENCE OF EDUCATION.

1. *Define feeling.*

Feeling is a mental stirring or excitement connected with some need or activity, animal or rational, arising through either the physical or psychical nature usually accompanied by, or involving, or consisting in, pleasure or pain, and in its rational forms ordinarily preceded by knowledge and leading to volition.

2. *What is the distinction between sensation and feeling?*

Sensation may be that which produces feeling of interest or excitement, or a condition of excitement or strong feeling; as, a three days' sensation. Sensation may be that which results from spiritual or inherent feeling; as, a sensation of joy.

3. *Make a brief classification of the emotions.*

They may be classified into (a) the personal—embracing the selfish, the social and the theistic; and (b) the impersonal—embracing the contemplative, the aesthetic and the practical. Or they may be classified into the (a) egoistic, as, joy, sorrow, content, etc.; (b) altruistic, as sympathy, love, hate, etc.; (c) intellectual, as, truth emotions, knowledge emotions; (d) aesthetic, as, those of the sublime and beautiful; (e) ethical, as, those of right or wrong, etc; (f) and the desire, as, the desire for existence, for property, for power, etc.

4. *How can the rational emotions be cultivated?*

5. *How can the improper and hurtful emotions be suppressed and subdued?*

The emotions may be repressed or cultivated through *habit*. "You feel morose and indulge the feeling. Day by day the feeling grows and may become a permanent trait. On the contrary, you assume a cheerfulness you do not feel; the effort becomes a tendency, and a cheerful disposition may be established. 'For use can almost change the stamp of nature.'"

6. *What are some of the emotions which the school should seek to develop?*

The emotions of content, hope, sympathy; truth and knowledge emotions; emotions of the sublime and beautiful; of right and wrong; the desire for knowledge; the emotion of patriotism, etc.

#### READING.

See "Literary Interpretations."

#### U. S. HISTORY.

See JOURNAL for June, '97.

#### ARITHMETIC.

1. *Should oral and written arithmetic be taken together or separately? Give reason for your statement.*

They should both be used in the same recitation, for they both contribute to the same end, the processes in each involve the same principles, and each is a help to the other.

2. Answer, 76.

3. *Which would be cheaper; to brick a sidewalk 275 ft. long and 4 ft. wide at 11 cents a square foot, or to lay a stone walk 5 ft. 6 in. wide and 275 ft. long at \$1.89 a square yard?*

$\$.11 \times (4 \times 275) = \$121$ , cost of brick sidewalk.

$\$.21 \times (3\frac{1}{2} \times 275) = \$202.12\frac{1}{2}$ , cost of stone sidewalk.

The brick walk is cheaper by  $\$81.12\frac{1}{2}$ . Note that \$1.89 per square yard is \$.21 per square foot.

4. *Find the interest of \$576.25 for 3 years and 3 months and 6 days at 7 per cent.*

Answer, \$131.76 $\frac{1}{4}$ .

5. *In mensuration problems requiring the use of the number 3.1416 would you show how the number is obtained? If so, state your method.*

The teacher should show how to get an approximate value. Take a radius of 10 $\frac{1}{2}$  in. and draw a circumference on the blackboard. The diameter will be 21 inches. Then take a string 21 inches long, as a measuring unit, and beginning at a marked point on the circumference, apply the string carefully to the circumference. It will be found that the string can be applied three times, and there will yet remain about three inches of the circumference, or one-seventh of the string. The thoughtful and tactful teacher will easily bring about the result that the length of the circumference is very close to *three and one-seventh times the length of the string, or diameter*. The 3 $\frac{1}{7}$  should be changed to 3.14+ to show its close agreement with 3.1416+, which the class should understand as a result that can be obtained by methods more nearly accurate.

6. *A house valued at \$24,000 was insured for two-thirds of its value, at  $\frac{3}{4}$  per cent. What is the insurance, including \$1.00 for the policy?*

Answer, \$97.

7. Discount, \$11.20; rate, 7 per cent.; time, 48 days. Find face of note by true and bank discount. No days of grace.

When the interest (bank discount) is 11.20, the rate 7%, and the time, 48 days, the principal (or face) is easily found to be \$1200.

By true discount, this \$1200 is the present worth, the \$11.20 is the true discount and \$1211.90, is the amount (or face).

8. How many rods of fence are required to enclose a square lot whose area is 5184 sq. ft.?

$\sqrt{5184} = 72$ ; 4 times 72 = 288, the number of feet in the perimeter; 288 ft. =  $17\frac{1}{2}$  rods.

9. Find the weight of a plank 15 ft. 9 in. long, 10 inches wide and 2 inches thick at  $41\frac{1}{4}$  lbs. per cu. ft.

Answer, 90 $\frac{1}{4}$  pounds.

#### GEOGRAPHY.

1. What parts of Asia are occupied by the white race?

Siberia, India, Arabia, Turkey and Persia.

2. What countries are the great tea producing countries of the world? What conditions as to climate and soil are necessary to the profitable culture of the tea plant?

China, Japan, India and Ceylon are the only places the tea industry has "taken root." It has been tried, with varying success, in the West Indies, the Southern States, Brazil and Australia.

Tea thrives best in light, friable soil of good depth through which the water percolates freely. Undulating, well-watered tracts, where the rain escapes freely, yet without washing the soil, are the most valuable for tea-gardens. The climate should be warm—indeed, the steaming heat that favors luxuriant jungle growth is the most favorable for the cultivation of tea.

3. What geographical reason can you give why the first settlement of the Mississippi Valley was southern rather than northern in character?

The geographical reason is found in the Appalachian Highlands, which, for some time, formed a barrier to northern entrances to the Mississippi Valley.

4. Locate the following named islands and tell to what country each belongs.

(a) Ceylon belongs to Great Britain; (b) Java belongs to The Netherlands; (c) Jamaica belongs to Great Britain; (d) Iceland belongs to Denmark; (e) Gaudeloupe belongs to France.

5. Take any one of the four largest cities of Indiana, and discuss it under two heads: (a) What conditions originally determined the location of the city? (b) What causes have combined to make it a large city?

INDIANAPOLIS.—The condition that determined the site of this city was that it should be as near as possible to the geographical center of the State.

The causes that have combined to make it a large city are—(a) its healthful climate and the rich soil surrounding it; (b) the abundance of

natural resources right at hand or within easy reach—such as coal, iron, timber, good water, etc.; (c) its central position with regard to the chief lake ports and river ports of the central states; (d) its position with regard to the immense amount of east and west travel and traffic—being on the most direct and choice route to the great west.

6. *Discuss the use of pictures in the teaching of geography under these heads: (a) The value of pictures. (b) The best way to use them.*

a) Good pictures represent well many things in regard to geography, which the child can never hope to see. Relief forms, different peoples, occupations, the products of labor, etc.—all these represented in pictures are, to the child, more fruitful of ideas than any oral or written descriptions.

(b) Use them, if possible, in connection with the lesson in the textbook, that the ideas there may be made more clear and vivid, and thereby be more firmly impressed upon the minds of the pupils.

## FOOD FOR THOUGHT.

[Send all communications to W. F. L. SANDERS, Connersville, Ind. They should be received by December 18. Be prompt. Write only on one side of your paper.]

### SOLUTIONS TO PROBLEMS.

PROBLEM 213. An old-fashioned dash churn half full of milk is 28 inches tall. The diameters of the upper and lower ends, respectively, are 12 and 16 inches. What is the depth of the milk?—MARK MOFFETT, Waveland.

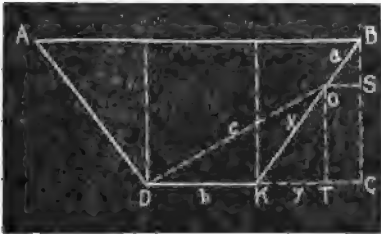
Solution by CLARENCE E. REID, Winamac:



Let the truncated cone ABCD represent the churn. Complete the cone OCD.  $\frac{OM + MN}{CN} = \frac{OM}{AM}$ , or  $\frac{OM + 28}{8} = \frac{OM}{3}$ , or  $OM = 84$ . Therefore,  $ON = 112$  inches. In the following work  $S = 3.1416$ . Vol. (OCD) =  $\frac{1}{3} SA^2 H = \frac{7168 S}{3}$ ; vol. (OAB) =  $\frac{3024 S}{3}$ ; vol. (ABCD) =  $\frac{4144 S}{3}$ ; vol.  $\left(\frac{ABCD}{2}\right) = \frac{2072 S}{3}$ ; vol. (OEF) =  $\frac{5096 S}{3} = \frac{1}{3} S \overline{ET}^2 \times$  OT.  $\frac{ET}{OT} = \frac{3}{14} = \frac{ET}{14}$ ;  $ET = \frac{OT}{14}$ ;  $\frac{1}{3} S \frac{OT^2}{196} = \frac{5096 S}{3}$ ;  $OT^2 = 998816$ ;  $OT = 99.95$ ;  $TN = 12.05$ .

**PROBLEM 215.** The north and south sides of a field are parallel; the other two sides are equal. The north side is 54 rods in length, and the south side is 18. A tree in the east side is 10 rods from the northeast corner, and 34 rods from the southwest corner. Required, the length of the equal sides, and the area of the field.

Solution by J. E. LUNG, Geneva :



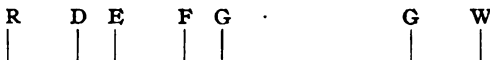
Let ABKD be the given field and O the given tree. ABKD is an isosceles trapezoid; then we know the projection KB·KC = 18 rods. From O draw OS parallel to KC and OT parallel to BC.  $c^2 = x^2 + b^2 + 2b^2 - 2by$ ,  $y = \frac{x^2 + 3b^2 - c^2}{2b}$ ;

since the triangles BOS and OKT are

similar,  $b - y : y :: x : a$  and  $y = \frac{ab}{x + a}$ ; therefore,  $\frac{ab}{x + a} = \frac{x^2 + 3b^2 - c^2}{2b}$ ; substituting the values of a, b and c, we get  $x^3 + 10x^2 - 184x - 8320 = 0$ , and factoring we have  $(x - 20)(x^2 + 30x - 416) = 0$ , whence  $x = 20$ ; therefore  $x + a = 30$  rds., the length of the equal sides,  $BK^2 - KC^2 = BC^2 = 576$ ;  $BC = 24$ . Area of trapezoid =  $\left(\frac{54 + 18}{2}\right) 24 = 864$  sq. rds.

**PROBLEM 216.** A, B and C start at the same time to travel to a town 40 miles distant. A walks at the rate of 1 mile an hour, B, 2 miles an hour, while C rides 8 miles an hour. C rides to the end of the journey, and then back until he meets A, whom he picks up and carries a certain distance, then again rides back and picks up B, who he carries just far enough to allow all three to reach the town at the same time. Find the time of the trip.

Solution by M. E. H., North Manchester :

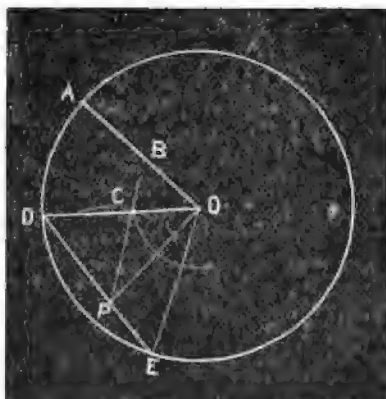


When C reaches W, A will be at D, 5 miles from R. Let E be the point where C picks up A. Then, since C travels 8 times as fast as A,  $DE = \frac{1}{8}$  of  $DW = 3\frac{3}{8}$ . Let EG = the distance C carries A and  $x = GW$ . Then  $EG = 35 - 3\frac{3}{8} - x = 31\frac{1}{8} - x$ . A walks  $5 + 3\frac{3}{8} + x$ . Therefore, the time of the trip in hours is  $5 + 3\frac{3}{8} + x + \frac{1}{8}(31\frac{1}{8} - x)$ . Let RF be the distance traversed by B until C leaves A at G. As B's rate is 2 miles an hour  $RF = 2\left(5 + 3\frac{3}{8} + \frac{31\frac{1}{8} - x}{8}\right) = 25\frac{5}{8} - \frac{1}{4}x$ ;  $FG = 40 - (25\frac{5}{8} - \frac{1}{4}x) - x = 14\frac{3}{8} - \frac{3}{4}x$ . Let H be the point where C picks up B. C's rate : B's :: 4 : 1. Hence  $FH = \frac{1}{4}(14\frac{3}{8} - \frac{3}{4}x) = 2\frac{3}{8} - \frac{3}{16}x$ , which B walks.  $HG = FG - FH = 11\frac{5}{8} - \frac{3}{8}x$ ;  $HG + GW = 11\frac{5}{8} + \frac{1}{8}x$ , the distance C carries B. While A walks from G to W, B walks from F to H, and is carried from H to W. Hence, as  $\frac{1}{2}$  the distance he walks and  $\frac{1}{8}$  the distance C carries him = the time, we have  $\frac{1}{2}(2\frac{3}{8} - \frac{3}{16}x) + \frac{1}{8}(11\frac{5}{8} + \frac{1}{8}x) =$  the time from F to W, which

must be  $x$  hours, as in that time A walks from G to W. Letting this expression for the time  $= x$ , and solving, we find  $x = 2\frac{1}{2}$ . Substituting this value of  $x$  in the expression for the time of the trip in hours found above, we find the time to be  $15\frac{1}{2}$  hours.

**PROBLEM 217.** Draw through a given point within a circle a chord which shall be divided at that point in mean and extreme ratio.—J. C. GREGG, A. M., Brazil.

Solution by the proposer :

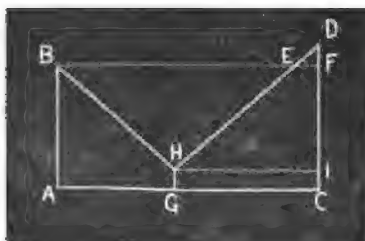


Let O be the center of the given circle, P the given point. Draw any radius as AO and divide it in mean and extreme ratio at B. With O as center, and radius OB, draw an arc, and with P as center and radius  $= AB$  draw another arc cutting the first in C. Then draw OCD and DPE and join O and E. DE is the required chord. For the triangles DCP and DOE are isosceles and similar and therefore PC is parallel to OE and divides DO and DE proportionally. By construction DO is divided in mean and extreme ratio, hence DE is also

so divided at P. If P is so near the center that PO equals, or is less than,  $AB - BO$  the problem is impossible. Any ratio instead of mean and extreme ratio might be solved as above.

**PROBLEM 218.** A post stands in a street so that from its top a wire 80 feet long reaches to a roof 55 feet high on one side of the street; and a wire 95 feet long reaches to a roof 64 feet high on the other side of the street. The two wires make equal angles with the post; required, the height of the post.—W. J. PAXTON, Orange P. O.

Solution by WALTER VANSOYOC, New Market :



$$CD = 64$$

$$HD = 95$$

$$FC = AB$$

$$FD = 64 - 55 = 9; ED = 95 - 80 = 15$$

$$DE : DH :: DG : DI$$

$$15 : 95 :: 9 : DI = 57$$

$$DC - DI = IC = HG$$

$$64 - 57 = 7 = IC$$

$$\text{Therefore, } HG = 7.$$

**PROBLEM 219.** The straight line joining the middle of the base of a triangle to the middle point of the line drawn from the opposite vertex to the point at which the inscribed circle touches the base, passes through the center of the inscribed circle.—PHILLIPS AND FISHER.

(No solution to this has yet been received.)

## ANSWERS TO QUERIES.

QUERY 60. Is there any direction in space?—R. D. WHEAT, Bryant.

The axis of the earth determines north and south in space and these directions are invariable. The direction toward which the earth is moving is called eastward; the direction from which the earth is coming is called westward. Clearly, both of the directions are varying every instant.

## CREDITS.

213, John Morrow, Charlestown; 215, 218, J. E. Lung, Supt., Geneva; 213, 216, 217 (two solutions), Clarence E. Reid, Winamac; 217, J. C. Gregg, A. M., Brazil; 216, M. E. H., North Manchester.

## PROBLEMS.

220. A stake 10 ft. long stands at an angle of 45 degrees. A horse is hitched to the top of the stake by a rope 50 ft. long. Over how much area can the horse graze? [J. E. LUNG, Geneva.]

221. The latitude of New York is  $41^{\circ} 30'$  and of Richmond  $37^{\circ} 45'$ . The distance from Washington to New York is 180 miles, and from Washington to Richmond, 120 miles. Find the included angle formed at Washington, and the distance from New York to Richmond. [J. STOMMEL, Hanover Center.]

222. ABCD is an inscribed quadrilateral, whose opposite sides BA and CD, DA and CB, meet respectively in P and Q. The diagonals intersect in O, through which lines are drawn from P and Q, intersecting the circle in E and F, and G and H, respectively. Show that PG, PH, QE and QF are tangents to the circle. [Original problem, by J. C. GREGG, A. M., Brazil.]

223. In the base AC of a triangle ABC take any point D; bisect AD, DC, AB, BC, in E, F, G, H, respectively: show that EG is equal to FH.

224. If the side BC of a triangle ABC be bisected in D, and the angles ADB, ADC be bisected by the straight lines DE, DF, meeting AB, AC, in E, F, respectively, show that EF is parallel to BC.

225. The pendulum which beats seconds is 39.1375 in. long; how many times per hour will a pendulum 1 yd. long oscillate?

226. Determine the depth of a conical glass 2 in. in diameter across the top, that 12 of them may contain a pint.

227. A regiment of militia containing 594 men is to be raised from three towns A, B, C. The contingents of A and B are in the proportion of three to five; and of B and C in the proportion of eight to seven. Required, the numbers raised by each.

228. A farmer bought calves, sheep and pigs to the number of 100 for \$100; the calves cost  $\$3\frac{1}{2}$  each, the sheep  $\$1\frac{1}{2}$  each, and the pigs  $\$ \frac{1}{2}$  each; how many did he buy of each?

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STATE SUPT. GREETING has issued a hand-book containing the names and addresses of all the truant officers of the state, by counties.

## TOWNSHIP INSTITUTE OUTLINES.

### PLATO, THE TEACHER.

In Plato's view of the matter, the conditions which are essential to the true welfare of a state must be determined upon ethical principles. Therefore, the motives which affect conduct become of first importance. The guardians of the state, *i. e.* its governors, should be entirely free from anxious thought about their own personal support, on the one hand; and, on the other, they should not be so wealthy as to have no motive for further exertion. Servility and enervating luxury are equally hostile to the development of honest energy of action and independent judgment. That the state may prosper, its "guardians" should be exempt from the temptations of both property and riches.

Since harmonious action is essential to a country's prosperity, a wise regard for its welfare will decide all questions concerning its size by considering how the change will affect its unity, for disunion is disruption, and that means death.

Plato would place the rule in the hands of the fittest, whatever their birth. The same idea is thus expressed by Shakespeare :

" O, that estates, degrees and offices  
Were not derived corruptly ! and that clear honor  
Were purchased by the merit of the wearer !  
How many then should cover that stand bare !  
How many be commanded that command !  
How much low peasantry would then be gleaned  
From the true seed of honor ; and how much honor  
Picked from the chaff and ruin of the times  
To be new-varnished ! "

After many centuries of educational wandering, the thinkers have, at last, returned to Plato's opinion concerning play. Froebel has, in his kindergarten exercises, given play its appropriate functions in educational development.

Through play, mother nature develops the body and educates mind and heart. Wise educators are beginning to apply Plato's ideas concerning music and games for purifying and elevating the children of the city streets. Song and movement and gesture are the natural expression of emotion in children. Educators must take account of this fact, if the work of education is to be effective in character building.

The process by which Socrates in his inquiry arrives at the solution of the original question concerning justice is, in reality, a subtle analysis of the nature of true worth in man. For the essentials of character are temperance, justice, wisdom and courage. To develop these is the ultimate end of education. Sin and vice are the evidence and the result of spiritual discord—a warring within the soul.

Whoever looks within will become conscious of the conflict of wills which Socrates describes. Since, if right choices are to be made, the appetites, or desires, must yield obedience to the reason, or wise judgment,



it is of first importance that the reason be enlightened. This inner conflict is thus eloquently portrayed by Shakespeare's Portia :

"The brain may devise laws for the blood, but a hot temper leaps o'er a cold decree ; such a hare is madness—the youth, to skip o'er the meshes of good counsel, the cripple."

True spiritual courage, according to Socrates, arises from an unfailing recognition of what the legislator, which is reason, judges to be the "right sort of fear" and of what are really dangers. Justice in the soul arises from an understanding of the soul's own powers—such a knowledge of one's self as will dictate in practice a just recognition of the rights of others. This will prevent dishonesty, treachery and every form of injurious action

Temperance is well shown to consist in the harmonious action of all the powers, so that, in nothing shall there be excess.

Such is the ideal in the individual as a part of a social whole. To foster this ideal, and to devise means for the developing of such character is the true function of education. Socrates believes that only a few are likely to realize this wisdom in the art of living. Therefore, he would put the government of the state into the hands of these few wise.

The fifth book of the *Republic* seems less modern in its discussion than those that have preceded it. Yet closer examination discovers it to suggest much that is essential to true education at any period,

The cultivation of courage as an essential virtue is the theme. For this cultivation Socrates depends chiefly upon the natural tendency to imitation. What we admire, that we shall strive to imitate. Hence, we shall strive to be developed by the example of elders.

While conditions in America are very different from those of Greece, the elders, both at home and in the school, must seek in a similar way, to establish true courage in the hearts of children. To-day this can be done by the presentation of examples of noble daring for some worthy end as depicted in history and literature. Thus ideals will be presented to the growing mind ; and, as Plato clearly shows, an ideal of conduct stimulates to effort ; and while perfection is unattainable, he who strives to reach an ideal will approximate it :

"Who aimeth at the sky  
Shoots higher far than he who means a tree."

"A human being who in word and work is perfectly moulded, so far as he can be, into the proportion and likeness of virtue,"—such an one, according to Plato, is the true philosopher, and it is to such as he that the government of states should be committed. Clearness of vision, magnanimity of feeling and action, a true understanding of what constitutes the realities—the essence of being—these should be attributes of those to whom is entrusted the guidance of the state. That they are not chosen for guardians or rulers, Plato attributes first, to the insincerity and inconsistency of many self-styled philosophers ; and, second, to the want of true insight in the multitude, whereby the popular mind is blinded, mistaking the transient appearance for the great permanent realities. In this connection, Plato emphasizes his belief that it is of the utmost importance that those who have

in charge the education of youth should realize that the true end of education is the development of the entire being in "noble and virtuous discipline." To this end, it is the duty of teachers and parents to supply suitable conditions for the healthful growth of body and soul. For education that does not foster noble ideals is really a promoter of vice and crime; and the finer the nature, the more evil will the character become, if the influences to which it is subject in youth are unwholesome.

The two degrees of knowledge of which Plato speaks may be characterized as intellectual short-sightedness—that which is limited to the material phenomena of time and space; and spiritual far-sightedness which gives a vision of the absolute truth and the pure good.

Philosophy is the attainment of this insight into the eternal verities. It is this which gives a pattern of perfection toward which to strive.

LOIS G. HUFFORD.

#### NOTES ON LANGUAGE ARTS.

In the teaching of composition the first consideration of the teacher should be to secure a clear, simple statement of the child's thought on the subject on which he is writing. In many instances the greatest barrier in the way of acquiring a good, strong, effective style is a misconception of the purpose of composition writing. It is a means to an end and not an end in itself. Every person, be he six or sixty, must make it a means to the expression of his thought so that it can be understood with the least expenditure of force on the part of the reader. A utilitarian basis will serve the pupil whose composition may never go beyond being a contribution to the "literature of knowledge," and it will not hinder the more gifted one who may come to be able to add something to the "literature of power."

The notion that composition writing is foreign to all the other work of the school has been another difficulty only recently coming to be appreciated. No wonder the child of the earlier time felt consternation at the thought of writing a composition. He was made to feel that in some way certainly unknown to him, he was expected to evolve something like to that which exists in great, unknown books, and to evolve it out of what he felt to be empty space. What a revelation to the sorely tried school boy to find out that a clear explanation of the problem he has solved is a composition, that a statement of what he has seen or heard or felt is a composition. A hint here and there will be sufficient to suggest to him that the explanation of the problem demands the most straightforward, plain manner of expression, the elimination of all words not actually needed in the setting forth of the thought. He will easily come to see that his recital of some personal experience will require the embellishment which aids in giving vividness to the picture.

Let children be encouraged, then, to write clearly and simply of the experiences of their own lives. Let them feel that all forms of expression are but the outer signs of the inner being. All else is sham, pretense.

In the teaching of literature there may be required a kind of grinding routine that is utterly destructive of the best results. If the work of

the school causes the child to love good books it has succeeded, if it has made him look upon the study of literature as a task to be performed, then has it failed of its purpose. It is true of course that the real appreciation of any art product must have some sort of intellectual basis, but the appeal must be made for the most part to the feeling. The boy who feels the appeal of the heroic in the story of god or hero is made more heroic. The girl who follows the simple story of self-sacrifice, is absorbed in thoughts that tend to sweetness of life. These are results that far outweigh all that may come in sharpened wit by keen, intellectual, critical analysis. These things have a place, but the boy who really feels lifted up out of what are perhaps sordid, selfish surroundings by the story or poem he has heard, is far better than he could become through a merely critical study of the finest piece of literature. The most beautiful thing in the world of nature is marred by being picked to pieces. The rose does not yield us its secret of loveliness when we tear it asunder. Its fragrance and beauty are ours when we rest content in feeling its beauty as a rose.

"O, to what uses shall we put  
The wildweed-flower that simply blows? .  
And is there any moral shut  
Within the bosom of the rose?

But any man that walks the mead,  
In bud, or blade, or bloom may find,  
According as his humors lead,  
A meaning suited to his mind.

And liberal applications lie  
In art like nature, dearest friend;  
So it were to cramp its use, if I  
Should hook it to some useful end."

EMMA MONT MCRAE.

#### THE "G. C. D." AND THE "L. C. M."

These topics are associated usually as "properties of numbers." They have some points of resemblance and perhaps as many of difference. Their ordinary definitions do not suggest their essential difference, *i. e.* the kinds of factors entering into their structure. The following are some points of unity:—

1. Each is selected from two or more numbers.
2. Each set of numbers may be composite.
3. Each set of numbers may contain one or more common factors.
4. The factors chosen for each must be found in the given numbers.
5. The general process for finding both the G. C. D. and the L. C. M. is the same in these particulars. (a) The separation of the given numbers into their prime factors. (b) The selection of the factors. (c) The use of these factors in a product.

The following are some points of diversity:—

1. In the one, the G. C. D., only one of the given numbers can be prime; in the other, the L. C. M., all may be.

2. In the one, all the numbers must contain, at least, one common factor; in the other, the numbers may have no common factor.

3. The one consists of the *different* factors used the *least* number of times they are found in any one of the numbers; the other consists of the *different* factors used the *greatest* number of times they are found in any one of the numbers.

4. The one is an equal part in any one of a number of given wholes; the other is a whole for any one of a number of given equal parts.

5. The G. C. D. is sometimes known as the H. C. F., highest common factor. This indicates that it may be thought in relation to two processes. When it is known as a divisor, the several numbers are regarded in the process of separation. When it is known as a factor, the numbers are thought in the process of making or combining.

The foregoing sets forth their chief elements of resemblance and difference. To illustrate the method in teaching them the following plan for the G. C. D. is suggested.

For the first, the teacher will select as her lesson content, the meaning of the G. C. D. and the process of finding it. This subject-matter assumes this form as the one in which she wishes the children to express it:

1. The G. C. D. is the largest number that will divide each of two or more given numbers.

2. It is found (a) By separating the several numbers into their prime factors; (b) by selecting the factors found in all the numbers; (c) by finding the product of these common factors.

The teacher is conscious that her immediate purpose is to lead the child to know this definition and this process. She knows also that she must excite interest in it and move the will, to accomplish even the knowing. She knows still further that these activities will greatly enlarge the child's inclination and power to attain other results. She keeps all these effects in view and makes them her purpose in the work of teaching this lesson.

The teacher is concerned in the third place, with the child's order in thinking the definition and process. She wishes to know the steps in this thinking.

1. He must first think a series of numbers for factoring.
2. He must think their different factors.
3. He must think their common factors.
4. He must form their product.
5. He must think the division of the original numbers by this product.
6. He must repeat this process with other series until he discovers the general truths, which are the definition and the process.

To do all this, the child must have a knowledge of factoring and preceding number facts and principles. This is his known from which he easily advances to the new truths.

The teacher must know this as the pupil's basis and as her own point of departure in the teaching process. At this point, she is interested in the means to be used to secure these ends. They must be selected with reference to the topic and must clearly lead to inferences fitting thereto. The teacher may properly use an assignment—not from the book. The defini-

tions are to be made, not formally memorized. The children must be led to make them; the teacher will use something to direct their thought and effort toward the definition and process wanted. Lists of numbers are given with these instructions:—

1. Separate into their prime.
2. Select those that are common.
3. Find the product of the common factors.
4. Divide each number in the groups by this product.
5. What do you discover?

The reasons for these directions are perhaps obvious. They should be clearly in the mind of the teacher. The effect she expects to produce must be clearly seen. In the recitation, the teacher asks some pupil to report his first series of numbers with their factors, common factors, product, divisions and inferences. Every answer must be tested by reference to other pupils and their work. Every series of numbers must be examined in a similar way. The inferences will need especial attention. The teacher is thus made ready to state what the G. C. D. is and the children have certainly learned how to find it.

The possession of the idea will warrant its name. In the exercise thus planned and executed, the idea has grown into the consciousness of every pupil, and he knows through his own activity what a G. C. D. is and the process he must use in finding it.

S. E. HARWOOD.

### HOW SHALL ONE READ PLATO?

[*An open letter to the common school teachers of Indiana.*]

Many ask this question. I ask in turn, how shall one read the Sermon on the Mount? That discourse contains profound philosophy. The wisest man might well spend his life in study of it. The world is full of learned books about it. *But*, we all know that the Sermon was addressed to the common people, that they heard it gladly and that in all generations the common people and little children have been able, without commentaries, to get from attentive reading of Jesus' words what is bread of life for them.

Can Plato be read as Uncle Tom read his Bible? Parts of Plato, like parts of Paul, are too hard for immature minds (see II Peter 3-16). But parts of Plato are intended for and are fitted for the folk.

(a) I beg of you to note for one thing that *Plato himself was opposed to the study of philosophy by immature persons*. He would not permit any one to study philosophy until he had a thorough education in art, and ten years in science, and until he was thirty years old. (See Republic VII, 537.)

(b) If you will read a little in almost any part of the book of selections, you will see that Socrates is represented as talking informally with or in the presence of and for the benefit of youths or other immature people. You will see that he loved to talk to such people and that such people loved to listen to him. In the Apology, Symposium, Phaedrus, Republic, Phaedo and in many other dialogues you will see that boys, and men of no special education, followed Socrates about for love of hearing him, somewhat as the disciples followed our Lord.

(c) If you look into Plato in this way, something may happen to you. You will fall in love with Socrates yourself. You may want to become his companion also, and your heart will burn within you as you walk with him by the way. You may not grasp the deeper concepts of the master, just as the disciples failed to grasp the full meaning of Christ's words, but your mind and heart will turn and grow toward the light. *There is not a teacher in Indiana who has earned a six months' license who might not in this way read Plato with profit and delight.* I speak from actual experiences. A hundred times I have seen the flash of youthful minds at the bare reading of Socrates' words.

I shall make a practical suggestion. For the next township institute choose some selection a month in advance. Let every teacher read the whole selection at home at least once. Appoint one of the most intelligent readers to conduct the institute exercise. Let that teacher choose the best passages and prepare to read them aloud before the institute. Let all the teachers bring their books. Let the hour be spent in reading, with only such conversation as may come up spontaneously. If any have read good commentaries well and good, but let that be secondary.

If in some such way the teachers of Indiana will put away the foolish fear of Plato, the philosopher, and become acquainted with Plato, the talker, this will be a red letter year for many lives in our State.

Indiana University.

WM. L. BRYAN.

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## MISCELLANY.

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### INDIANA STATE TEACHERS' ASSOCIATION.

[*Forty-Fourth Annual Session, State House, Indianapolis, December 28, 29, 30, 1897.*]

#### GENERAL ANNOUNCEMENT.

1. The general Association and all the Sections meet in the State House. The time and place of each meeting will be posted at the entrances to the State House and at all the hotels.

2. The Headquarters of the Association will be at the Grand Hotel. The grand Hotel will give a rate of \$2.00 per day to members of the Association where two or more persons occupy the same room.

3. The Denison, Bates, English and other hotels will give the usual reduction to members of the Association.

4. Fees.—The initiation fee is one dollar for gentlemen and fifty cents for ladies. The annual fee for members is fifty cents.

5. Excursion Rates.—All persons who wish to take advantage of excursion rates *must secure a certificate* from their home railroad agent stating that they have paid full fare to Indianapolis; and this certificate *must be presented to the railroad secretary of the Association.*

6. A fine Decker Brothers' Piano will be furnished through the courtesy of D. H. Baldwin & Co.

## GENERAL ASSOCIATION.

TUESDAY, DEC. 28, 8:00 P. M.—Invocation—Rev. J. Cumming Smith.

Music—Piano Solo, "Tannhauser March"—Miss Wellie Geeting, Indianapolis.

Address of Retiring President—Supt. J. F. Scull, Rochester.

Inaugural Address—President R. A. Ogg, Greencastle.

Music—Cornet Solo, "Le Secret Polka"—Frank I. Walker, Principal Richland Schools.

Address, "What the Public Demands of the Public Schools"—W. H. Sanders, Marion.

Appointment of Committees. Adjournment.

WEDNESDAY, DEC. 29, 9:00 A. M.—Invocation—Rev. B. A. Jenkins.

Music—Vocal Solo—A. D. Hitz.

"How Secure Better Educational and Social Relations between Teacher and Patron—Supt. W. H. Sanders, Rensselaer.

Discussion, opened by Miss Anna Wilson, Crawfordsville. General Discussion.

Music—By Music Section.

"Distracting Elements in the School Life of the Pupil. How Meet Them?"—Supt. A. E. Humke, Vincennes. Discussion opened by Miss Laura Frazee, Terre Haute. General Discussion. Music.

"The Unnecessary Burdens of the Grade Teacher. How Relieve Them?"—Miss Kate Moran, Prin. State Normal Training School. Discussion opened by Supt. F. L. Jones, Tipton. General Discussion. Adjournment.

WEDNESDAY, DEC. 29, 8:00 P. M.—Piano Duet—Misses Wellie Geeting and Belle Reger, Indianapolis.

Annual Address, "The Common People and the Common Schools"—Prof. William Hawley Smith, Peoria, Ill.

Cornet Solo, "Sur La Tyrolienne, et Variatione"—Supt. E. H. Drake, Kentland.

THURSDAY, DEC. 30, 9:00 A. M.—Invocation—Rev. C. N. Sims. Music.

Symposium, "Equipment of the Teacher"—1. "Professional and Scholastic Training of Teachers," Supt. D. T. Powers, Paoli. 2. "Self-Preparation," Mrs. Emma Mont McRae, Prof. of English, Purdue University. 3. "Experience as a Preparation," Hon. D. M. Geeting, Supt. Public Instruction. 4. General Discussion.

Music. Reports of Committees. Miscellaneous Business. Adjournment.

Papers will be limited to thirty minutes.

Leaders in discussion will be allowed ten minutes.

All others taking part in discussion will have five minutes.

The President will observe the time limits of each speaker.

T. F. FITZGIBBON, *Chairman Ex. Com.*

R. A. OGG, *Pres.*

## ENGLISH SECTION.

## FIRST SESSION.

TUESDAY, DEC. 23, 2:00 P. M.—Paper: "The Scope and Purposes of English Literature in Secondary Schools"—Sidney C. Newsom, Indianapolis Manual Training School

Discussion opened by Wm. E. Smyser, De Pauw University.

The following subjects have been suggested by English teachers over the State for brief general discussion, no one speaking more than five minutes:

1. How Shall the Teaching of English Composition be Effective?
2. The Legitimate Relation of Composition to Literature.
3. What English Prose Should be Taught in Secondary Schools?
4. The Place of the History of English Literature in a High School Course.
5. What Should be the Requirements for a Good Text Book in English Literature in Secondary Schools?
6. What Can be Done to Preserve the Sense of Humor in Our Students?
7. The Place of Word Study in the High School?
8. The Culture of Imagination by Means of English Literature

## SECOND SESSION.

WEDNESDAY, DEC. 29, 2:00 P. M.—1. "The Study of Plot in Literature"—Prof. Chas. J. Sembower, State University. Discussion General.

2. "Power gained from the Study of Fiction in Secondary Schools"—Miss Charity Dye, Indianapolis. Discussion opened by Prof. Clarence D. Stevens, Vincennes University.

Papers limited to twenty-five minutes. Leaders in discussion to five minutes each.

The program committee for the English section has originated nothing for this program but has attempted only to organize suggestions received from many English teachers over the State, both from colleges and from secondary schools. We have placed upon the program both the persons and the subjects that have been suggested to us. We hope, therefore, the program is representative and satisfactory.

E. O. HOLLAND, *Sec.*

W. E. HENRY, *Pres.*

## HIGH SCHOOL SECTION.

WEDNESDAY, DEC. 29, 2:00 P. M.—"The relation of High School Curriculum to Higher Education and to Life"—Dr. R. J. Aley, Head of the Mathematical Department, Indiana University. Discussion led by Robert Spear, Prin. Evansville High School.

- Symposium, "Management"—1. "The Principal's Place in the School System," D. R. Ellabarger, Prin. Richmond High School. 2. "Discipline in the High School," Miss Adelaide Baylor, Prin. Wabash High School. 3. "What Shall Determine Standing of Student in the Class?" D. K. Armstrong, Principal Peru High School. 4.



"Equipment Necessary for Entrance to High School," Supt. A. E. Humke, Vincennes.

Papers in Symposium limited to ten minutes.

C. S. MEEK, *Chairman Ex. Com.*

J. C. TRENT, *Pres.*

### MUSIC SECTION.

#### FIRST SESSION.

- WEDNESDAY, DEC. 29, 1:30 P. M.—1. "Possibilities of Music in Rural Schools," Herman E. Owen, Terre Haute, Supt. Music, Vigo County.
2. "The Song Element in School Music"—Miss Nannie C. Love, Muncie.
  3. "Public School Music"—Wm. J. Stabler, Indianapolis, Pres. Ind. M. T. A.
  4. "Music For Boys"—Mrs. Carrie B. Adams, Terre Haute.
  5. "Conception, Method and Taft in Music Teaching"—W. T. Giffe, Logansport, Ed. "Home Music Journal."
  6. "Fossilism"—J. S. Bergen, Lafayette.
  7. "Ears"—Wm. L. Miles, Fort Wayne.

[All supervisors of music, especially, and any teachers who are interested in music work, and, may we say, all who desire to *become* interested, are respectfully *urged* to attend this session. Time will be given for brief discussion of the papers.]

#### SECOND SESSION.

- THURSDAY, DEC. 30, 9:00 A. M.—"Ultimate Musical America, Who Responsible?"—Max Leckner, Indianapolis, Ex.-Pres. Ind. M. T. A.
- Ruskin has said—"A joy, to be a joy forever, must be a joy for all."
- Music for the Masses. The Teacher's Pre-eminent Problem, "What Lack I Yet?"
- A Round-Table Discussion led by W. E. M. Browne, New Castle.
- J. S. BERGEN, *Ch. Ex. Com.*      MISS CHARLOTTE LONGMAN, *Pres.*

### CLASSICAL SECTION.

- TUESDAY, DEC. 28, 2:00 P. M.—1. "Greek in the High School"—Miss Levona H. Payne, Indianapolis High School.
2. "The Classical Library of the Secondary School and How to Get it"—H. A. Hoffman, Prof. of Greek, Ind. University.
  3. "Reading at Sight in the Secondary School"—Miss Myrta Abbott, Knightstown High School.
  4. "Examination or High School Certificate as a Test of Fitness for College"—Wilbur T. Ayers, Academy of DePauw University.
- MISS CORA BENNETT, *Sec.*      EDWIN POST, *Pres.*

### PRIMARY SECTION.

- WEDNESDAY, DEC. 29, 2:00 P. M.—"Discipline in the Primary Grades, How Far it Should Conform to the Freedom of the Kindergarten and

How Far Follow the More Rigid Discipline of the Higher Grades?"

—Miss Nebraska Cropsey, Indianapolis. General Discussion.

"Number Work"—Mrs. E. E. Olcott, Charlestown. General Discussion.

"What is the Best Literature for the First Year's Work?"—Miss Gertrude Robinson, Terre Haute. General Discussion.

"Why is it Wrong to Have all Myth or all Science Work in the Primary Grades?"—Miss Lida Cline Brooks, Anderson.

"Systematic Games"—Miss Frances Benedict, Worthington.

"How Far Should Original Investigation be Carried in the Nature Work in the First and Second Grades?"—Miss Mabel Shirley, Martinsville.

"The Relation of the Kindergarten to the Primary School"—Round-Table Discussion.

Executive Committee—Miss Helen A. Robb, Miss Sadler, Miss Trimble.  
MISS LUPTON, *Sec.* MRS. SARAH E. TARNEY-CAMPBELL, *Pres.*

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MATHEMATICAL SECTION.

THURSDAY, DEC. 30, 2:00 P. M.—1. "Algebra and Nature"—Prof. T. G. Alford, Lafayette.

2. "Geometry and Nature"—Miss Eva Lewis, Huntington.

3. "Elementary Physics and Mathematics"—Prof. J. P. Naylor, Greencastle.

Committee on Program—C. A. Waldo, Eva Lewis, J. E. Higdon.

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ELOCUTIONISTS' AND READERS' SECTION.

THURSDAY, DEC. 30, 2:00 P. M.—1. Paper: "Is College Oratory of To-Day on the Wrong Track?"—Prof. A. R. Priest, DePauw University.

2. Paper: "The Relation of Rhetoric to Oratory"—Prof. A. A. Ewing, Wabash College. Discussion opened by B. C. Sherrick, Westfield Academy.

3. Paper: "The Aesthetics of Elocution and Reading"—Miss A. Blanche Breneman, Indianapolis. General Discussion.

FRIDAY, DEC. 31, 9:00 A. M.—Miscellaneous Business. Election of Officers, etc.

MISS BERTHA HOSFORD, *Sec. and Treas.* T. J. MCAVOY, *Pres.*

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CHILD-STUDY SECTION.

THURSDAY, DEC. 30, 2:00 P. M.—1. Paper—Eugene Bohannon, Worcester, Mass.

2. Paper—Miss Grace Peirce, Terre Haute.

3. Paper—Prof. F. M. Stalker, State Normal, Terre Haute.

4. Report of Clark University Summer School—Miss N. Cropsey, Indianapolis.

HOWARD SANDISON, *Sec.*

WILLIAM L. BRYAN, *Pres.*

## COUNTY SUPERINTENDENTS' SECTION.

TUESDAY, DEC. 28, 2:00 P. M.—1. "The Need of Closer Supervision for the District Schools. How Best Obtained?"—Calvin F. McIntosh, Owen County. Discussion—W. O. Baker, Morgan Co.; M. W. Deputy, Jennings Co.; C. A. Van Matre, Delaware Co. General Discussion. Talks limited to five minutes each.

2. "Should Township Trustees Temporarily Abandon Small District Schools and Transport the Pupils to Other and Larger Schools at Public Expense?"—Lee O. Harris, Hancock Co. Discussion—J. H. Grover, Clinton Co.; W. E. Carroon, Fountain Co. General Discussion. Talks limited to five minutes each.

Miscellaneous Business.

WEDNESDAY, DEC. 29, 2:00 P. M.—1. "Does Indiana Need Another State Normal School?"—F. J. Young, Allen Co. Discussion—B. Clapham, Whitley Co.; Geo. R. Wilson, Dubois Co. General Discussion. Talks limited to five minutes each.

2. "What Constitutes Professional Training?"—A. L. Gary, Rush Co. "How Does Professional Training Help the Teacher?"—Lawrence McTurnan, Madison Co.

"How Does Professional Training Help the Superintendent?"—Isaac F. Myer, Carroll Co.

General Discussion led by Elmer C. Jerman, Decatur Co.

W. E. WINEBURG, *Sec.*

E. G. MACHAN, *Pres.*

## INDIANA ACADEMY OF SCIENCE.

[*Thirteenth Annual Meeting.*]

TUESDAY, DEC. 28.—Meeting of the Executive Committee at the Hotel Headquarters, 8:00 P. M.

WEDNESDAY, DEC. 29.—General Session, 9:00 A. M. to 12:00 M.

Sectional Meeting, 2:00 P. M. to 5:00 P. M.

Address by President Thomas Grey, 7:00 P. M.

THURSDAY, DEC. 30.—General Session Followed by Sectional Meetings, 9:00 A. M. to 12:00 M.

General Session, 2:00 P. M. to 4:00 P. M.

## LIBRARY ASSOCIATION.

Library Association of Indiana will meet Dec. 29 and 30 at the rooms of the State Library.

A question session will be held, and those wishing to send contributions of questions will address the Secretary prior to the meeting.

MISS M. E. AHERN, *Sec.*

MISS E. D. SWAN, *Pres.*

## COLLEGE ASSOCIATION.

Tuesday, Dec. 28 and Wednesday, Dec. 29.

PROF. ANDREW STEVENSON, *Sec.*

DR. W. L. BRYAN, *Pres.*

## CITY SUPERINTENDENTS' CONVENTION.

The Eighth Annual Meeting of the Association of Town and City Superintendents was held in Agricultural Hall, State House, November 4 to 6. The meeting was called to order at 7:50 P. M. by the president, Supt. Welford D. Weaver, of Marion. After the reading of the minutes by the secretary, Supt. Frank M. Beard, of Hartford City, the report of the committee on "School Economy" was presented by the chairman, Supt. J. N. Study, of Fort Wayne. Among other things the committee said "Among the things lacking in our school system may be enumerated: 1. Reasonable length of school year. 2. Township high schools or an equivalent in the payment of tuition in high schools already established. 3. An arrangement for the consolidation of school districts and the abandonment of schools which have not a constituency of a size sufficient to obtain good work. 4. A change in the examination of teachers by which the papers of the applicant shall be examined by some central authority and the licenses issued made valid throughout the state. 5. The separation of civil and school township and the requirement that the township school trustee shall possess educational qualifications sufficiently great to enable him under the direction of the county superintendent, to supervise the schools of his township. 6. The establishment of a general library system in connection with the schools of the state." After a general discussion by members of the association which brought up the discussion of the provisions of Senate bill No. 59 and why it failed to pass, the work of the committee, by vote of the association, was approved and the committee continued for another year. In this connection a resolution was proposed commending the work of the legislative committee in its work represented in Senate bill No. 59, and recommending that the effort be continued in the meeting of the next General Assembly. The resolution was approved.

The remaining part of Thursday evening and the day sessions of Friday were devoted to reports from the committee of forty on course of study and discussions. The report of the committees on Geography, History, Reading and Grammar had been prepared and put in print and were presented by the various chairmen for discussion. The work of the committee on Arithmetic was presented in typewritten form by Chairman Carr, of Anderson. After a general discussion of the various reports, including commendations and criticisms the work as a whole was referred to a committee composed of President W. D. Weaver, of Marion, B. F. Moore, Frankfort; J. W. Carr, Anderson; Edward Ayres, Lafayette; A. E. Humke, Vincennes and T. A. Mott, Richmond. The committee will revise, and correlate the work of the five committees of eight each in the light of suggestions made by the association and will have the work printed and ready for distribution to superintendents throughout the state as soon as possible.

On Friday evening Superintendent L. H. Jones, of Cleveland, delivered a very fine address upon "The Principles that Underlie the Formation of a Course of Study and Which Constitutes the Canons of Criticism" which will be found in full in the January issue of the JOURNAL.

The Saturday morning session was given to general discussions of the

following topics: "The Compulsory School Law and the Parental Home," "Child Study and Mothers' Meetings," "Too Close Supervision," "Department Work in the Seventh and Eighth Grades," "To What Extent should the Superintendent Interfere in the Internal Management of the Schools?"

The meeting was largely attended there being nearly one hundred city and town superintendents present. The following named persons were elected officers for the ensuing year: President, Supt. B. F. Moore, Frankfort; Vice-President, Supt. T. A. Mott, Richmond; Secretary Supt. Leva M. Foster, North Vernon. Executive Committee: Supts. W. D. Kerlin, Martinsville; W. A. Millis, Attica; R. E. Call, Lawrenceburg; J. H. Tomlin, Shelbyville; Geo. S. Wilson, Greenfield; Edward Boyle, Michigan City and Mrs. Sarah T. Campbell, Anderson.

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#### A PROTEST.

The examination questions prepared by the State Board of Education are as a rule fair and above criticism. When an unusual question does occur it attracts more attention and causes more adverse criticism than if such questions were the rule. It is difficult to see why such a problem as No. 10 of the arithmetic list for September should be used to determine the fitness of a man or woman to teach in the common schools of Indiana. The problem reads as follows: "In a level pasture a post stands 50 ft. from one straight boundary and more than 60 ft. from the other boundaries. A horse is tethered to the stake by a rope 60 ft. long. Over how many square feet of pasture can he graze?"

This problem is not an arithmetical problem. A long and deep study of arithmetic will not give the ability to solve it. Neither algebra nor geometry give an exact solution. The student must know algebra, geometry, and trigonometry if he is to solve the problem exactly. Of course he may learn from some so-called arithmetic an arbitrary rule for approximating the result. The value of such problems is in the intelligent application of the principles of geometry and trigonometry, and not in the arbitrary application of approximate rules. We must surely hope that the problem got in the list by accident and not by design. May such accidents never again occur.

Indiana University, Bloomington, Ind.

ROBT. J. ALEY.

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#### INDIANA UNIVERSITY.

Prof. E. B. Bryan has a very interesting class in pedagogy. They spend some time each week in visiting schools, either in the city or country. After the visit, they thoroughly discuss all they have seen and try to determine wherein lies the strength or weakness of the teacher visited. This work is invaluable to those preparing for superintending.

President Swain recently addressed the teachers' institute of Steuben County. He also had a pleasant visit at the Tri-State Normal, and made a brief address to the students.

Vice-President W. L. Bryan gave a strong address before the Y. M. C. A. Convention, at Evansville, on "The Simple Life."

Dr. Frank Fetter read a paper on Charity Relief before the Charity Conference at Evansville.

Dr. J. F. Brown, of the Department of Philosophy, has been seriously ill for a number of weeks.

Bishop John Hazen White, of Indianapolis, recently addressed the students on the subject of Victories. He successfully sustained the thesis that the Church is to-day achieving her greatest victories. The students are always glad to welcome Bishop White.

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#### REFORM SCHOOL REPORT.

Superintendent Charlton reports to the treasurer of state that the entire number of boys present in the Reform School at Plainfield for the last six months was 630. Twelve counties in the State were not represented, Marion County heads the list with 114, Vigo second with 44. The sanitary arrangements at this school must be about perfect. There was no sickness during the past summer and the boys, along with other work, made and burned 400,000 bricks and erected a new school building of six rooms. The school transforms bad boys into good carpenters, bricklayers and plasterers.

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ROCKVILLE sends out its "Outline of Course of Study" for '97-8 in good shape. Superintendent J. F. Thornton has certainly given the matter much careful study.

HUNTINGTON COUNTY has a uniform course of study for its high schools. It is a four year course. The subjects are outlined and printed in pamphlet form.

BUTLER has a new school manual. It is not large but it makes its points and will answer well the purpose for which it was intended. C. W. Kimmel is the new Superintendent.

MADISON sends out its annual manual for 1897-8. It is very full and complete, and yet nothing seems superfluous. It shows all through the deft hand and fertile brain of Superintendent C. M. McDaniel.

THE N. E. A. has not yet been definitely located for next year. It seems that the committee has ruled out Los Angeles and Salt Lake City, and that the choice lies between Omaha and Washington City.

*The Argus* is the name of a paper published by the Richmond high school. The first issue of Vol. II. is at hand. It contains some good reading and it is put out in good form. Earl B. Barnes is Editor-in-chief.

EVANSVILLE.—Superintendent Hester has arranged for a series of "Popular Educational Lectures" to be delivered in the new high school building during the winter months. Professor W. F. M. Goss of Purdue, gave the first one.

*The High School Oracle*, Vol. 1, No. 1, from Kokomo is before us, and has our hearty approval. We examined it carefully and are so well pleased that if No. 2 comes to us we will give that similar treatment. Frank B. Long is Editor-in-chief.

SOUTHERN ILLINOIS has organized a "School Council" with the view of unifying the educational forces of that part of the state. Its membership is limited to 100, and it will meet twice a year at Carbondale. D. B. Parkinson is its first president.

THE NATIONAL SUPERINTENDENTS' CONVENTION will hold its next meeting at Chattanooga. The latter part of February will be a good time to visit this romantic and historic city and section of the country. Indiana should be well represented.

*Porter County Schools* is the name of a neat little paper printed in the interest of Porter County teachers and edited by the county superintendent. It contains valuable suggestions and will be a great convenience to both superintendent and teachers.

SHERIDAN celebrated Arbor Day in fine style with marches, orations, talks, music, tree-planting, &c. After planting one tree named "Union" and another "Columbia," there was a break in the printed program and a third tree was planted by the senior class in honor of the Supt., Milo H. Stuart.

LAWRENCEBURG has issued its school manual for 1897-8, which is the first by the present Superintendent, R. E. Call. In the course of study and in the suggestions to teachers, "especial prominence has been given to nature work, not as an end in itself but as a means to other and more material objects."

WINAMAC has a new manual which makes a very complete showing of its schools, and the course of study with comments and suggestions comprise the greater part of it. A. T. Reid is the old-new superintendent and is taking hold of his work with renewed vigor and with intention of making his schools equal to the best.

LEBANON.—Arbor Day was appropriately celebrated at each of our three buildings. The celebrations were unique in many respects. The high school voted for a State tree with the following results: For the oak 77, maple 39, elm 3, poplar 4, hickory 1, sycamore 1. Twelve did not vote at all. Of course, Supt. Jas. R. Hart directed all proceedings.

PURDUE UNIVERSITY has sent out announcement of its "Winter School of Agriculture," to begin January 3, and end March 18. This is a special course for those who cannot spend an entire year in school and of great interest and value to the average farmer. Young people especially should take advantage of it. Send for circular giving full particulars. Address Prof. W. C. Latta, Lafayette.

HAMILTON COUNTY.—Arbor Day was generally observed throughout this county. Appropriate exercises were held in every school house and trees planted in many localities. Acting upon the suggestion of County Supt. E. A. Hutchens, each teacher had his school vote upon the kind of a tree they thought should be adopted as the state tree. The voting showed that the two favorite varieties were oak and maple, but the latter variety received a large majority of the votes.

IN THE last few months the exports of electrical apparatus from the United States have amounted to over \$2,000,000, an increase of twenty-five per cent. over the total exports in that line during the whole of 1896. One does not need to seek far for the reason of this. Foreigners are buying electrical apparatus of us because they get the latest and the best, and save money in the operation.

THE State Geologist has on hand a few more sets of the last seven reports from his office, which he is willing to send to high school libraries, on application. There is no charge but those who send must pay expressage. These reports contain a great deal of valuable information in regard to Indiana and are certainly desirable books for school libraries. Write to State Geologist Blatchley at Indianapolis.

GREENFIELD.—Good word comes from these schools, which are under the supervision of Geo. S. Wilson. The work is good and the attendance is good. The new compulsory law is putting additional children into the schools and the law is generally approved. The Teachers' Reading Circle has been organized under the direction of the superintendent. Several of the township teachers have joined with the city teachers in this work.

THE SOLDIERS' AND SAILORS' ORPHANS HOME, at Knightstown, appropriately observed Arbor Day. Two hundred and forty-three trees were planted on the grounds last fall by order of the trustees. The children planted six more on Arbor Day. At the conclusion of a very interesting program Supt. A. H. Graham gave an appropriate address, in which he pointed out a group of trees planted by the first children in the home, the original ten children, under the guardianship of Miss Susan Fussell.

HARTFORD CITY.—A two column article in a local paper describing the condition of the schools of this place shows them in excellent condition. A representative of the paper and a health officer visited all the rooms without previous warning to the teachers so they were seen in their everyday dress. The health conditions, the order and the instruction are highly praised. It is well known that Supt. Frank M. Beard believes thoroughly in Herbart's system of Pedagogy, is giving it a thorough test, and is meeting with marked success.

COLUMBUS.—The enrollment and daily attendance this year exceeds the highest ever attained. The enrollment up to Oct. 29 was 1,407. The average daily attendance for September was 1,273 and for October, 1,275. The enrollment in the high school is 187, about 40 more than any previous year's total enrollment. John J. Boyle, of Chicago University, is the new English teacher. W. C. Cox, of Earlham College, is the new man in science work. Both are doing good work. Sam'l Wertz continues principal of the high school and J. A. Carnegie continues as superintendent.

FRANKLIN COLLEGE.—Between fifty and sixty have matriculated this term. Our roll for the year will probably be 250. There are eighteen in graduating class. The Literary Societies are doing more debating this year than usual. The faculty and superintendents, principals and teachers here-



abouts are forming a club to meet monthly for the study of current topics—this year Sociology. Miss Cora Spear, a graduate three years ago, has just gone as Missionary to Mandalay, Burmah. Our library now contains about 12,000 vols. Professor Gardiner is doing excellent work in the department of English. We expect to add \$100,000 to our assets by the close of the century. In this will be a \$25,000 fire proof library building. Dr. W. T. Stott continues our efficient president.

**WABASH COLLEGE.**—The enrollment of the college at the beginning of the year was up to the total enrollment of last year, making a very considerable gain. The students coming from the commissioned high schools number a larger aggregate this year than for the past five. The college has recently received \$75,000 from the Fayerweather estate. Its invested funds now amount to one-half million and its plant is worth at least \$400,000 in addition. The faculty remains unchanged. It is the policy of the institution to obtain the best available men in the several departments and hold them in permanent relation to the institution. This institution prides itself on the thoroughness of its work. For catalogue and desired information address the President, Geo. S. Burroughs, Crawfordsville, Ind.

**BUTLER COLLEGE** enters upon her forty third year of work with the the brightest of prospects. More new students than usual have entered. The college classes, with the exception of the senior class which, owing to a change in curriculum is very small, are of increased size, and the average standard of daily work, is noticeably high. The change in the course of study gives more prominence to work in Psychology and Sociology and to French and History than heretofore. These departments have been strengthened in instructors and facilities for thorough study. Several new professors have been added to the faculty, among them, Dr. J. D. Forrest, Professor of Sociology and Economics; Dr. Edward S. Ames, Professor of Philosophy and Pedagogy; Prof. Karslake, of the Chemistry department; and Prof. Jabez Hall, who has charge of the recently organized Bible School. Prof. Bruner, of the department of Biology and Geology, returns after an absence of two years in Freiburg, Germany and brings with him the very latest apparatus and discoveries in his line of work.

**STUBEN COUNTY** has for many years held its institute the second week in November. The plan of dividing the school year in this county is unique. There is a fall term of two months before the institute, then there is a spring term of two months after winter or main term. It often happens that teachers are changed at the institute vacations and it occasionally happens a different teacher is employed for each term. This is one of the best institute counties in the State. Coming at the time it does the attendance is generally good, and the interest is always first class. This year the outside worker was H. W. Pattingill, ex-State Superintendent, of Michigan. The home workers were principally from the Tri-State Normal and the work was very satisfactorily done. Mr. Pattingill's work was of a practical kind and was presented in such a way as to give universal satisfaction. The new Superintendent, Homer Dilworth, is a graduate of the Tri-State Normal, and is taking hold of his new duties in such a way as to command the

respect of the teachers and his success is not questioned by any one who knows his ability and his studious habits. As usual the *five* evening entertainments were all well attended.

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### PERSONAL.

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L. H. KREKE is the Millersburg man.

A. R. HUYETTE is in control at Bristol.

S. C. WRIGHT holds the reins at Idaville.

C. K. MCCALLY is in charge at Fremont.

J. F. ROOSE is principal at Pleasant Lake.

W. J. WHINERY is teaching at Raub this year.

J. H. SHAFER does his "switching" at Monon.

ALBERT J. COLLINS still holds the reins at Orland.

T. P. FRENCH is serving another year at Hamilton.

S. W. BAER is principal of the schools at Nappanee.

E. B. RIZER is monarch of all he surveys at Wolcott.

E. BRADNER is directing the young ideas at Hudson.

W. O. CONVOY knows all about the Brookston schools.

J. H. RISLEY is principal of the Petersburg high school.

L. D. COFFMAN is principal of the high school at Salem.

A. R. BROWN, of Corydon, is the new principal at Loogootee.

J. W. WYANDT still continues in charge of the Angola schools.

S. A. LAIRD and three associates keep the wheels moving at Chalmers.

C. M. PLANK is seeing that the Burnettsville schools go right this year.

B. W. AYRES is principal of the normal department of Taylor University at Upland.

D. W. THOMAS continues at the head of the schools at Elkhart, and is doing good work.

W. H. SIMS is serving his fourteenth year as superintendent of the schools at Goshen.

J. W. HAMILTON is doing some original work as superintendent of the Monticello schools.

GEO. C. POWERS, last year of Jay county, is superintending the schools at Farmland this year.

H. W. MONICAL is directing the educational interests of the historic town of New Harmony.

C. E. MORRIS, ex-superintendent of the Salem schools has entered the State University for a full course.

J. F. BROWN, PH. D., of Indiana University, has a number of interesting lectures on the live topics of the day which he would give under favorable conditions.

FINLEY GEIGER is the name of the new county superintendent of Blackford County. His address is Hartford City.

FRANK K. MOWRER, superintendent of the Warren schools, and most of his teachers recently spent a day visiting the Kokomo schools.

W. H. FOREMAN continues to superintend the schools at Petersburg. The school interest is growing and the new school building will afford much needed room and facilities.

W. H. FERTICH, superintendent of the Bloomington schools, is having an unusually good year. The attendance is the largest in the history of the schools and the interest is excellent.

L. M. SNIFF, president of the tri-State Normal, did some unusually effective work in arithmetic in the Stueben county institute this year. This was to be expected as he is unable to do any other kind.

W. G. MOULTON, who has been at Modoc for the past two years as principal, goes to Parker. Parker is a larger town, Mr. Moulton has more different schools to look after, and he will receive better wages.

J. S. HALL, a former county superintendent, is now proprietor of the New English Hotel, Indianapolis and takes pride in showing special favors to teachers who stop with him. Furthermore he makes teachers a special rate for the State Association. Call and see him.

PROF. O'SHEA, formerly of Buffalo, N. Y., is now a member of the faculty of the University of Wisconsin, in the department of Pedagogy. The place which he held in the Buffalo School of Pedagogy will be filled by Prof. Galbraith from the Illinois State Normal University.

HENRY R. PATTINGILL, editor of the *Michigan School Moderator* and of *Timely Topics*, has done several weeks' work in the institutes of Northern Indiana, and is likely to do still more work another year. His work is practical and helpful, and his manner is pleasing and attractive.

DR. T. J. BASSETT, for many years principal of the preparatory department at DePauw University, has entered the ministry and is now pastor of St. Paul's M. E. Church in Lafayette. Dr. Bassett is a popular institute worker and has hundreds of friends among the teachers. THE JOURNAL regrets to lose Dr. Bassett from the educational ranks.

GEO. P. WEEDMAN, after serving seven years as superintendent of the Cannelton schools, resigned in order to complete his course at the State University, which he hopes to do in one year. Mr. Weedman did a good work for the Cannelton schools, and it is pleasant to announce that he expects to return to educational work.

G. M. NABER, for many years the efficient superintendent of Whitley County, was married November 10, to Miss Ella Mossman, of Treaty, Ind. Mr. and Mrs. Naber will be at home to their friends, at Treaty, after December 1. Mr. Naber has a host of friends among the teachers and superintendents of the state who will join the JOURNAL in extending to both Mr. and Mrs. Naber hearty congratulations.

A. J. WHITELEATHER, last year and for several years superintendent of the Knox schools, died at his home in Etna Green, October 2, of heart failure. He had been in failing health for several months, and had just returned from a Sanatorium, as he and his friends thought, much improved. Mr. Whiteleather was a graduate of the State Normal, and was a man of the highest integrity. To know him was to respect him.

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### BOOK TABLE.

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THE 1898 Columbian Pad Calendar is a very useful memorandum book filled with bright thoughts and interesting pictures. Send 10 cts. in stamps to the Pope Mfg. Co., Hartford, Conn., and get one.

*The Journal of Germanic Philosophy*, edited by Gustaf E. Karsten, of Indiana University, is a magazine of high order and deserves the patronage of all persons interested in Germanic philosophy or literature. It is published by Ginn & Co., Boston.

*The Antiochian* is the name of the college paper edited by the students of Antioch College (Horace Mann first president). The paper ranks well with papers of its class. Its editor-in-chief is W. M. Dawson and he is filling his office well. Antioch has recently received a bequest of \$19,000 and a part of this will be used to put the college buildings in first-class order.

*The Kindergarten Magazine* now published at Chicago, the center of the kindergarten world, is the ablest publication in that interest. This magazine is devoted to the methods and principles of kindergarten work and also to making it a part of the public school system. President Charles W. Eliot, of Harvard University, writes: "The instruction of children between four and six is just as much a part of the public business as that of children between six and eight.

THE HISTORY OF INDIANA by W. H. Smith, of Indianapolis, is just out and is the only complete history of the State yet published. State Librarian W. E. Henry says of it: "Mr. Wm. Smith, of Indianapolis, has published the greatest single contribution to the literature upon Indiana that has been issued from the press. Mr. Smith's History of Indiana is much the completest record of the life of our State so far published both as to the period covered and the many phases of our life represented."

THE HELPER is a special midsummer number of *School Education* published by School Education Co., Minneapolis, Minn. It contains much material for nature study, programs for all the *special* days in the school year, and songs and music specially adapted to school use. It is plentifully and beautifully illustrated and in both conception and execution is a "thing of beauty." The teacher who owns a copy need not be at a loss for material for the proper observance of any unusual occasion. It contains 132 pp. and costs but 25 cts.

*St. Nicholas*, conducted by Mrs. Mary Mapes Dodge, enters upon the

twenty-fifth year of its successful career as the leading magazine for boys and girls. A remarkably varied and attractive list of features has been secured for the coming year. Rudyard Kipling's first "Jungle Stories" were written for *St. Nicholas*, and this year he will contribute a new series of stories to the magazine called "The Just-So Stories," written in a new vein—fantastic stories. Mr. Frank R. Stockton will contribute "The Buccaneers of Our Coast." This is a series of narrative sketches in which will be treated the origin, characteristics, adventures, and exploits of that wild body of sea-rovers, calling themselves "The Brethren of the Coast." Mr. J. T. Trowbridge has written a serial, "Two Biddicut Boys and Their Adventures With a Wonderful Trick Dog." A lively story of track and field is "The Lakerim Athletic Club," by Rupert Hughes. Mr. W. O. Stoddard writes a stirring romance of chivalry, "With the Black Prince." A fairy-tale of science "Through the Earth," by Clement Fezandie, is a serial of the Jules Verne order. There will be the usual number of articles of instruction and entertainment, short stories, poems and jingles, as well as hundreds of pictures by leading artists. The price of *St. Nicholas* is 25 cents a copy, or \$3.00 a year.

*The Century Magazine*, with its November number, enters upon its twenty-seventh year. During its long existence by reason of its many notable successes, it has won an assured and commanding position. During the coming year *The Century* will maintain its exceptional position as a magazine of entertainment and as a leader in art and thought. Its pictorial features will be notable, and it will command the services of the foremost artists, illustrators and engravers of this country and of Europe. Nothing like a complete announcement of its literary features can be attempted now. Dr. Weir Mitchell, whose novel of the American Revolution, "Hugh Wynne," is the great success of the year, has written a new story for the present volume. It bears the piquant title, "The Adventures of Francois: Foundling, Adventurer, Juggler and Fencing-Master during the French Revolution." The tale is full of romance and adventure. Mrs. Burton Harrison contributes a new novel of New York life, called "Good Americans," in

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6-11.

which contemporaneous social types and tendencies are brightly mirrored and described. There will be a group of clever stories about horses and people who like horses, under the general title of "Gallops." "A Woman's Reminiscences of the French Intervention in Mexico" will be given in a series of graphic and highly picturesque papers by Mrs. Cornelius Stevenson. Further contributions to the interesting series of "Heroes of Peace" will be made by Jacob A. Riis, Gustav Kobbé, Elizabeth Stuart Phelps Ward, and others. For the benefit of readers of *The Century* an unusual combination offer is made for this year. There has been issued "The Century Gallery of One Hundred Portraits," made up of the finest engravings that have appeared in the magazine, and representing a total expenditure of nearly \$30,000. These are printed on heavy plate-paper, with wide margins, like proofs. The retail price of the gallery is \$7.50, but this year it will be sold only in connection with a subscription to *The Century*, the price of the two together being \$6.50.

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### BUSINESS NOTICES.

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**SCOTTISH RITE MASONS OF INDIANA, FALL CONVENTION, INDIANAPOLIS, IND., DEC. 7-9, 1897.**—On account of the Fall Convention of the Scottish Rite Masons of Indiana to be held at Indianapolis, December 7 to 9, agents of the C. H. & D. Ry., in Indiana, will sell tickets at rate of one and one-third fare for the round trip. Tickets will be on sale December 7, 8 and 9, good returning until December 11.

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**ENGLISH HOTEL.**—The English Hotel, Indianapolis, has been remodeled and an addition of three hundred rooms is being made to it. It now has over two hundred available rooms, elegantly furnished. It is without question the most expensively furnished hotel in the State. It is located on the Circle, opposite the great Soldiers' Monument, in the very heart of the city near to business and to all public buildings. It is well kept and is growing more popular every day. Its proprietor, J. S. Hall, is an old teacher, was for many years superintendent of Crawford county. He takes special pains to give to teachers "the best he has in the shop." He would like to have a good delegation at the State Teachers' Association, and he doubtless will have. In fact, the county superintendents have already decided to make the English their headquarters. For the State Association, he has agreed to make the teachers a rate of \$1.50 a day.

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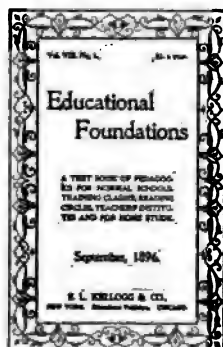
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## PLATO'S EDUCATIONAL DOCTRINES.

ARNOLD TOMPKINS.

Plato's formal doctrines of education are set forth in his Republic, which may suggest that his aim in education is political; that it is a means to the welfare of the state as an end. And many statements make it seem that Plato would sacrifice everything to the making of his ideal state. Against individual interests, he would destroy family ties and establish a system of common property. The course of instruction proposed is to fit citizens for their respective functions in the state. What the individual needs in and for himself seems to concern Plato less than what will make the state secure and prosperous.

But a nearer approach to Plato will reveal the fact that his purpose is not political but ethical; that, while it may be true that he somewhat loses sight of the individual, he is seeking the perfection of the species. According to Plato's doctrine of ideas he would hold that the species, and not the individual, really exists. This doctrine modifies his ethical view. Since humanity and not man really exists, all things must work together for the perfection of the race. Since the state is the concrete form of humanity, whatever goes to perfect the one perfects the other.

But, without pressing the distinction as to whether the end of education is in the individual or the race—a distinction which vanishes in the process of education—the ethical end is quite clearly shown in the course of argument through the Republic. The Republic opens with a discussion of justice, which is first

viewed as a kind of relation existing between individuals in society. Then arises the question, what is justice, in and for itself? Is not a just life better than an unjust one, aside from any question of social relations? Plato suggests that justice is the virtue of the soul by which it performs its function. Justice is the condition of the inner harmony of the soul, as well as the condition of outer harmony in the state. Plato closes the first book and opens the second with the emphasis on the value of justice to the individual soul. Says Glaucon to Socrates, in speaking of justice and injustice: "I long to be told what they respectively are, and what force they exert, taken simply by themselves, when residing in the soul, dismissing the consideration of their rewards and other consequences." And Adeimantus urged Socrates to show "what each is in itself, by its own peculiar force as it resides in the soul of its possessor, unseen either by gods or men." And again, the same character: "So do not limit your argument to the proposition that justice is superior to injustice, but show us what is that influence exerted by each of them on its possessor, whereby the one in itself is a blessing and the other one is a bane." A large part of the second book is devoted to the emphasis of this thought.

After much urging by Glaucon and Adeimantus, Socrates agrees to undertake the exposition of the nature of justice in the individual soul. On account of the difficulty of the nature of the undertaking, Socrates proposes an advantageous method of inquiry, which he thus illustrates: "Suppose we had been ordered to read small writing at a distance, not having very good eyesight, and that one of us discovered that the same writing was to be found somewhere else in larger letters and upon a larger space, we should have looked upon it as a bit of good luck, I imagine, that we could read the latter first and then examine the smaller, and observe whether the two were alike." Socrates now proceeds to develop an idea of the state, so that justice may be seen written large and may be easily read, after which he proposes to read it written small in the individual. This is the arc through which the argument swings—justice in the individual, through justice in the state, back to justice in the individual. Justice in the individual, which is the inner harmony of wisdom, courage and temperance, is analogous to justice in the state, which is the outer harmony of wisdom, courage and temperance

in society. Virtue in the individual and in the state consists in justice, wisdom, courage and temperance. Justice is the means by which the other three take root in the state, and the state is the means by which justice, the inner harmony of wisdom, courage and temperance, is established in the individual. The individual is weak, and needs the state to strengthen virtue in the soul.

Plato, in developing his idea of the state, showed that there must be three classes organically related—guardians, warriors and producers; the guardians or magistrates to exercise the wisdom of state, the warriors the courage, and temperance or restraint to be exercised by the lower class in particular and all in general. Justice keeps each class in its proper place and working harmoniously to the good of the whole. Since the state is the individual written large, there must be three faculties in the individual, the development and proper co-ordination of which constitutes his education.

This brings out more definitely Plato's conception of the aim of education. These faculties are *reason*, *spirit* or *courage*, and *desire* or *appetite*, the latter requiring temperance for its control. These three are thus deduced: A thirsty man often refuses to drink; hence there must be two principles in him. One prompts him to drink, the other forbids. Thus there are two elements in the soul—one rational, the other irrational or appetitive. Now, when there is conflict between the rational and irrational elements, a third element, called resentment, or the spirited element, or courage, rises up to give victory to the rational element over the appetites. To educate man, then, according to Plato, is to strengthen him unto victory over his lower nature, to give full realization to his rational nature. In this Plato has set up the highest aim in education. It is not utilitarian, not merely for citizenship, not for any adventitious gain through social influences, but for the soul's own worth, the realization of its own inherent nature. To such a conclusion we would expect Plato's doctrine of ideas to lead him. He could never accept an external, temporal good while believing in the supremacy of a spiritual, rational principle. Thus Plato's aim in education is supremely ethical. He wished to see virtue realized in the soul and embodied in the state—virtue, the just relation of wisdom, courage and temperance; not, as in the case of the Spartans, for victory and state

supremacy; not merely as a political device for the temporary settlement of interests and theories then agitating the people of Greece. The unsettled condition and rapid development in state affairs perhaps served as the incident which gave form to his ethical theories inherited from his great teacher, Socrates. Hence, the form and content of his educational doctrine.

More definitely, Plato sought to reform society by putting the control of affairs into the hands of the guardians, or magistrates, who were to exercise wisdom and rational control, by means of the warriors, over the industrial class, just as the individual must be reformed by bringing his life under the control of his rational nature. These rulers must be philosophers, standing above society and shaping it by ideas derived from a higher source than society itself. In this, it has been suggested, we have the prophecy of the future church, the standing army and the industrial community. Plato thought that all could not become philosophers, some being able to rise only to the warrior class, and some only to the industrial class. This ability was tested by tastes and endowments manifested during the process of instruction. Those who manifested no capacity to dwell in pure ideas were classed with the great mass of mankind who live the lower life of sensuous gratification. After a child was found to belong to the lowest class no further attention was given to him, believing that his natural inclination would do all for him that could be done. This is a sad view to take of the lower strata of humanity, and the only consolation Plato found was in the Pythagorean and Egyptian doctrine "that those human beings who fail to attain harmony in one life will have opportunities to do so in other lives." Plato's doctrine of education, therefore, requires individual immortality and a future state of probation, which was definitely planned in three stages similar to the orthodox paradise, purgatory and hell. The noble natures remaining after the ignoble had been remanded to the lowest class must yet be divided into warriors and philosophers. This is done while both are being trained in music (including letters) and gymnastics, the curriculum of the time. The division is made on the basis of whether there is manifested an ability to rise above mere training to philosophic thought. Those capable of training, but who can not rise to reflective thought, are put into the military class, and their education confined to cultivating the qualities of the

soldier. Plato emphasizes most the education of philosophers. They are to be exercised on a wide range of subjects, and their education continued longer—to fifty years of age. Their intellectual and moral powers are to be fully tested and proved. The highest of all studies for them is the study of the good, for without true conceptions of it they could not wisely direct the affairs of the state. They must turn from the sensuous world and gain an insight into the real world, which lies beyond the senses—"from the visible to the invisible and eternal." They must be trained to reflect on the essential nature of things through such studies as arithmetic, plain geometry, geometry of three dimensions, astronomy, harmonics and dialectics. Much in the details of Plato's system has no interest for us now, yet one can scarcely read a page without having suggested truth of immediate and vital application in all times and places. For instance, when, in describing the education of the philosopher, he shows that the individual must be trained to look below appearances to realities, that the soul must undergo a revolution from its sensuous to a rational life, he has said the last word on method in education. The figure in which he presents this idea, given on the first two pages of Book VII, is worthy of meditation by every teacher. Some of Plato's ideas are of the past, and are read without practical interest, but most of them are of the present.

But the formal statement of Plato's doctrine of education as found in the Republic is not all of his contribution to the subject; perhaps it is the least part of it. That which is implicit in his doctrine of ideas, set forth elsewhere in his dialogues, especially in his Theatetus, is of untold value to every student of pedagogy, whether for practical or theoretical purposes. The most pervasive error in present practices of education grows out of the conception that teaching is a mechanical process, and this grows out of the idea that learning is such a process. It is assumed that the mind is something other than the what it knows; that its content is given to it. The mind is a receptacle called memory, and ponderable things foreign to it are hoisted into it by mechanical devices, which the teacher is to become skilled in wielding. Hegel says: "To learn—namely, according to the ordinary notion of it—expresses the taking up of a foreign somewhat into the thinking consciousness; a kind of mechanical combination and filling up of an empty space with things which are themselves of

a foreign nature and indifferent to the space which they fill. Such an external state of relation toward that which has come into it—a relation in which the soul appears as a *tabula rasa*—belongs to that style of thinking which makes out the growth of a living being to be a mere addition of particles, and is something dead and unfitting for the nature of mind, which is subjectivity, unity, being, which is by itself and eternal in its nature." Whatever defects may now be seen in Plato's doctrine of ideas, there is always the broad suggestion that in learning an object the soul is becoming conscious of itself, finds itself, fulfils itself in the object. The great question of method in education is not one of petty devices and dexterity in manipulating machinery, but how does the finite, individual mind find its true nature in the infinite mind as it manifests itself in the external world. Plato would insist that the pupil penetrate to the universal life through the individual phenomena, and thus universalize his own life. In emphasizing the distinction between the world of phenomena and the real world upon which it rests, Plato has introduced the teacher to the most fundamental conception of the concrete process of teaching.

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### STUDY OF LANGUAGE IN THE SCHOOLS.

[From an outsider's point of view.]

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The method employed of teaching children in the lower grades to memorize selections from the standard writers, has long been one of my pet theories, and I cannot let this opportunity pass without a word upon the subject. In the first place, this exercise is valuable as a means of cultivating the memory. It is impossible for one to be a good speaker or a good writer without a good memory, and this memory must have, besides other qualities, the quality of being verbal or exact. Great linguists have always been noted for their powers of retention and reproduction. There is no faculty of the mind which can bring its energies into effect unless the memory be stored with ideas for it to work upon. Burke says: "We talk of creative minds, but that is only a figure of speech, for man can create nothing, he can only select and combine. Genius, it is true, lights its own fire, but not until it has collected material with which to feed the flame."

In the second place, this exercise is most valuable as a means of enlarging one's vocabulary. It has been said that any one may become a good conversationalist who studies carefully the beautiful, pure English of Washington Irving. How we mark the cultured man by the way he insensibly weaves into his conversation the thoughts and expressions of the great masters of thought who have preceded him.

It may be true that many of these quotations which are given to the children in these lower grades, are beyond their present understanding; but the time will come when they will emerge into definite meaning to their minds, and it will then be a pleasure and a benefit to possess these memory gems. It is what we learn earliest that we retain longest; that sticks, as some one has aptly remarked. Ideas and words that vividly impress the childish mind, photograph themselves upon it forever, and there is no need of wasting the facile memory of early youth on doggerel, for the rhyme and flow of beautiful verse is always pleasing to children. There are words and thoughts that never lose their hold upon our hearts; they may be words that we seldom hear, and thoughts that we seldom think in the busy whirl of life, but they have had a controlling influence in shaping our destinies and can never be wholly forgotten. How necessary, then, that we should teach children only the best words and the best thoughts.

The little time that must, of necessity, be devoted to discussing the meaning of these quotations is not thrown away by any means, for it is surprising how far the little ones do see into the meaning sometimes.

In the third place, this method is such an easy way to introduce these little ones to the names of our great writers, and is an almost sure way of awakening an interest in their writings. One little girl, a pupil of the first grade, repeated at home some lines from Longfellow, and asked her mother to guess who wrote it. The mother guessed right, and then said, "Are you studying Longfellow at school?" "Oh, yes; and all the other fellows who wrote poetry," was the quick reply.

Another first grade pupil, a little boy this time, seemed so interested in the quotations which were taught him at school, that his mother, with a view to fostering this interest, presented him with a framed picture of the standard American poets. At first the little fellow was very much delighted, but after a while

his face fell and he said, "Why, mamma, they have left out Shakespeare, and it was Shakespeare who said, 'To thine own self be true: It must follow as the night the day, thou can'st not then be false to any man.' " And then he proceeded to tell many things of interest about the poets. He didn't get Shakespeare's nationality quite right; but it seemed to the astonished mother that that was about all he didn't know about him.

This same mother one day proposed to buy some books for her little son, telling him that he should start a library of his very own, regardless of what other members of the family might have, and she mentioned getting Longfellow, Bryant, Whittier, Holmes, and several other books. When she had finished, the little fellow said, "You forgot the Cary sisters;" Alice Cary who said:

"True worth is in being, not seeming,  
In doing each day that goes by  
Some little good; not in dreaming  
Of great things to do by and bye;  
For whatever men say in their blindness,  
And in spite of the fancies of youth;  
There's nothing so kingly as kindness,  
And nothing so royal as truth."

"And Phoebe Cary said:

"Do you think you could learn to sing a song,  
Though you drummed and hummed it all day long,  
Till hands and brain were aching;  
That could match the clear untutored notes  
That drop from the pretty, tender throats  
Of birds, when the day is breaking?"

His mother often hears him repeating such little verses while at his play, and he understands their meaning, too. One day he told her how the teacher had explained what it meant to do a little good each day, and he repeated the illustrations she had used in the explanations.

I think that the chances are very small that children educated in this manner will find, in years to come, any material satisfaction in the dime novel and other veritable trash with which the world is flooded. The foundation is being laid for better work than that, and the teacher is building far better than she knows.  
—Mrs. Kistler, from a report of a Teachers' Institute, Denver.



## MEMORY VERSES IN GEOGRAPHY WORK.

MISS JOSIE BUNDY.

Memory verses have a place on nearly every school program for no matter how crowded the work may be these gems of literature accommodate themselves so admirably to the subjects taught that they take up little extra time, and can so often be used to "point a moral or adorn a tale" that they cannot be easily dispensed with. The whole wide field of literature is the teacher's to select from and she will wisely choose many of those best adapted in thought and language to her pupils so that she can draw from a full treasury just such an one as occasion requires.

The following verse will be enjoyed by children who are learning of the shape of the earth and its motions, and they can be inspired with a wonderful desire to say each word so as to best express the thought.

" Like a cradle rocking, rocking,  
Silent, peaceful, to and fro,  
Like a mother's sweet looks dropping  
On the little face below—  
Hangs the green earth, swinging, turning,  
Jarless, noiseless, safe and slow,  
Falls the light of God's face bending  
Down and watching us below."

If some bright pupils doubt the judgment of the writer for saying that the earth moves "like a cradle" and "slow," be pleased that they "know enough geography" to make the criticism. Then let the criticism be lost in an aroused feeling of gladness that the earth moves "jarless, noiseless, and safe," and perhaps there will be awakened or deepened in the childish hearts a sense of trust such as little Pippa had when she sang

" God's in his heaven—  
All's right with the world !"

In connection with the lessons on day and night the following verse found in a Sunday-school paper may be memorized :

" Good-night pretty sun, good-night,  
I've watched your purple and golden light  
As you were sinking to rest.  
And some one has just been telling me  
You're making over the shining sea  
Another beautiful day.

That just at the time I'm going to sleep  
The children there are taking a peep  
At your face and saying, "Good-morning!"  
Just when I say 'Good-night!'  
Now, beautiful sun, if they've told me right  
I wish you'd say good-morning for me  
To all the little ones over the sea."

This verse was a great favorite with a class of fourth year pupils, and often when the sun's rays fell aslant through the western windows lengthening the little shadows, they would repeat it as a closing exercise, sending the greeting to their Chinese sister Pense, and all the other little ones whose home is 'over the shining sea.'

When these same pupils studied the lesson in the Elementary Geography on "More About the Water," they learned this familiar stanza—

Little rills make wider streamlets,  
Streamlets swell the rivers flow,  
Rivers join the ocean's billows  
Onward, onward as they go.  
Life is made of smallest fragments  
Shade and sunshine, work and play,  
So we may with greatest profit  
Learn a little every day.

They were delighted to trace the similarity between the first part of this stanza and the first paragraph of the lesson mentioned. One bright girl of nine, who was very apt in figurative speech, in explanation of the latter part of the verse said that their reading was one branch, arithmetic another, geography still another, and these with all the other branches they studied flowed together and formed their education.

No special effort was made by the teacher to moralize on the thought at the time, but she waited till a more convenient season, a reading lesson involving the subject of "fragments," and thereby adroitly leading them from one step to another she caused this very memory verse to flash across the minds of a happy class—happy in thinking they had "thought it out for themselves."

These verses given are but a few of the great number that can be used to good advantage in connection with the geography work. The teacher's present work is for future results, and each memory gem planted in the mind of the child may become

the nucleus for a beautiful growth of thought all his own that will weave itself into the life that is to be and give coloring to it.

North Vernon.

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### EDUCATIONAL PROGRESS.

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T. G. ALFORD.

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In regard to the necessities for educational progress and the method of its accomplishment, teachers are divided into three classes. First, there are the agitators of educational reform—those who realize that our educational system as now established is not accomplishing what it ought to accomplish ; but they do not understand the nature of the difficulty or how to remedy it. For this reason their arguments in favor of changes partake largely of the nature of sophistry. They stand in the same relation to educational progress that social agitators do to social progress. The many educational “fads,” such as enriching the course of study, better supervision, insufficient preparation of teachers, etc., have their origin with this class of educational workers. The discussion of such subjects may result in great good to our school system, but they are like a physician’s remedies administered for temporary relief without attempting to relieve the real cause of the patient’s disease. Tinkering with courses of study and passing laws requiring higher intellectual qualifications of supervisors and teachers can do but little to free our school system from the real evils that prevent its progress.

In contrast with these educational “agitators” are the “conservatives,” who oppose any change in the established order of things. A change to them means one of two things, a loss of position or an awakening to greater exertion to maintain their educational standing. These are the well-to-do pedagogues who prefer to walk in the well beaten path because it is smoother and causes them less exertion. They are educationally like those people socially who oppose all changes because they interfere with their selfish ease. Fortunately this class is very small and possesses little influence.

The third class is composed of the large majority of educational workers. It holds views less radical than those of the “agitator” but more progressive than those of the “conservative.” The members of this class agree with the former in

the belief that our system of education is very imperfect and that there are great evils in it that need to be remedied. They believe that our school system is not doing for the coming generation as much as the State and society have a right to expect. They differ from the "agitators" as to the nature of the trouble and as to the method of remedying it. They do not believe that the real trouble is to be found in the environment of the school, nor is it in the devices of instruction or the mechanical administration. The trouble lies deeper and is inherent in the system itself. The very spirit of the school is wrong. It can not turn out men and women who shall be up to the full standard of our great civilization so long as it is dominated by selfish motives and holds before the coming generation a standard of success that can be realized only by the accumulation of dollars and cents. This may be the ideal of success held by most individuals of the present day, but an analysis of our civilization reveals the fact that its ideal of success is vastly deeper and broader. It is one that thinks less of *self* and more of *others*. The real problem to be solved is how to bring about a change of ideals. How can the spirit of the school be changed so that it shall teach the coming generation that the end of education is not the mere accumulation of material things to support life but that it is life itself. This can not be done by attempting to enrich a course of study that even now contains so many good things that there is not time enough in the school life of any individual to do thoroughly the half that is expected. It is not the many things that the child can do indifferently well that fits him for his place in modern civilization; but it is the thoroughness and conscientiousness with which he can and does do the few things that he is by nature fitted to do. Discussing the "New Education," when no two of the disputants agree as to what the term means, can ever accomplish much in the onward progress of education. This third-class of educational workers admit that our school system ought to be radically changed, but they are not convinced by the sophistry of the "agitators" as to the best method of remedying the evil. As fast as this great body of workers make up their minds as to what the necessities of our school system really are and as to the best method of meeting these necessities, so fast will real educational progress be made.

Purdue University.

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HOW TO BEGIN THE STUDY OF A CONTINENT.

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ALEXANDER E. FRYE.

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All elementary work in geography should be in preparation for the step beyond the limits of sense-perception, into the realm of imagination, *i. e.*, from the school district to the unseen world. The *apparent* form, size, and motions of the earth are now to be resolved into a vast globe, rotating and revolving in the solar system. From the hills and valleys of our district we are to build in imagination the great plateaus and river-basins of distant continents. The little brook, with its load of rich silt, must show us how the earth's great garden-spots have been made. The same laws that moved the air in our schoolroom, and over the little pond and sandy field, are now to girdle the globe with its great windbelts, and, obeying the same laws that have regulated the growth of plants in our little garden, the surface of earth is to be clothed with vegetation. Only as we have acquired elementary ideas of geographical forms, forces, and conditions, shall we be enabled to imagine them on the grander scale on which our beautiful planet is constructed.

This, then is fundamental: Before the pupils are ready to begin the study of a continent they must have studied in their school district the types of all the forms and forces which make up the unseen world.

In beginning the continent work, probably the greatest fault is the attempt to teach too many details of relief, outline and location. How often are the little pupils forced to model and draw hundreds of unimportant forms of relief and coast-line which the teachers themselves cannot retain in memory, and all this merely because they are in the text-book. It is a fact not to be denied that not one teacher in a hundred can state from memory the number of square miles in the largest six river-basins of the globe; and yet nine-tenths of the some teachers drill, drill, drill their pupils upon the areas of all the countries of the world, the heights of mountain peaks, length of rivers, areas of petty states, population of cities, and heaps of other geographical rubbish.

The essentials of *relief* of a continent are: (1) the great plateaus which divide the surface into the principal water-basins; (2) the few highest mountain ranges which serve as water-part-

ings between the basins; and (3) the great rivers which locate the lines along which the continental slopes meet. Given these essentials of relief, together with the great wind circuits that bear them moisture, and the pupils can reason readily the distribution of soil and life upon the globe. "But," exclaims the book slave, "what shall we do with all these questions about lengths, areas, populations, etc?" Throw them into the educational waste-basket, and when the superintendent or school committee try to rake them out, have the grit to tell them that you have spent your time upon something of more value. Stand by the children. If you do not protect them, who will? What teachers most need to-day is backbone! Another fault is in trying to teach too many details of coast-line. Day after day is spent in most schools imitating complicated outlines which no teacher living can reproduce from memory one week after vacation has begun, even if before. The only features of coast-line worth drawing and remembering (and none are worth drawing that are not worth remembering) are such as exert a marked influence over the climate of a large portion of a continent, together with the harbors and bays through which the commerce of the world passes. Limit the work to that which is practical, give the children mental pictures of the world in great outline, drill upon such features by modeling and drawing till they are firmly lodged in memory, and then our pupils will go out into life with a basis laid for all future reading and study.—*Public School Journal*.

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#### CHILD STUDY RUN MAD.

There is a growing and perhaps unfortunate tendency in conservative educational circles to poke fun at the new cult, "Child Study." This tendency is not lessened by the silly stuff that is being published as the result of "investigation" in the new field. Here is a sample:—

"Fear was first manifested in the fifth week. The child was laid nude on the bed, whereupon he started and threw up his arms as though afraid of falling. His fears were removed by throwing a light covering over him or by putting on a garment."

The absurdity of this performance as a means of reaching valuable psychological conclusions deserves the castigating pen of a Dickens. Think of trying to get "scientific" data by watching the antics of an unclad baby when placed upon a cold counterpane! Suppose the child had been similarly treated the week before: it would very likely have "thrown up its arms," or screamed or done some other thing, and then the experimenters could have solemnly recorded the momentous fact that it "manifested fear" during the *fourth* week. At this rate we shall soon need a society to rescue babies from being "child studied" into croup and tonsillitis, also a censorship to protect educational literature from the infliction of unmitigated slop.—*Learning to do by Doing*.

**PRIMARY DEPARTMENT.**

*Edited by Mrs. Sarah E. Tarney-Campbell, Supervisor of Instruction in the  
Anderson Schools.*

**THANKSGIVING EVE.**

It was Thanksgiving Eve—so they said—  
And hurried the children in nightgowns and caps,  
And tucked them up warm in each bed.  
And the snow fell down on the old roof-tree,  
And kept them as cozy as cozy could be.

It was Thanksgiving Eve, don't you think,  
The pies were in rows on the pantry shelves,  
And nice things to eat, and nice things to drink,  
Resignedly looked for the morrow to bring  
A miserable end to everything.

It was Thanksgiving Eve, and a noise  
Like the whirring of wings in the midst of the wood,  
When the birds are chased by the boys—  
And a turkey, old and big and plump,  
Got on to his feet with a clump, clump, clump.

It was Thanksgiving Eve, if you please,  
Even the chickens turned round in the pie,  
And stretched their legs at their ease.  
And the coast was clear, for the folks were abed,  
So they picked their way out with a martial tread.

It was Thanksgiving Eve, and alas !  
Not a drumstick was left in that kitchen forlorn  
To tell what had come to pass.  
Not a tip of a wing, nor a scrap of good meat  
Was left for those Thanksgiving diners to eat.

It was Thanksgiving Eve, and, just hark,  
A terrible sound, appalling to hear,  
Came peeling down stairs in the dark :  
"Mamma, is it true?" cried a chorus in fright,  
"Ben says that our dinner's run off in the night!"

It was Thanksgiving Eve, and, oh joy !  
The wet little cheeks were tenderly pressed,  
"O, Ben! you ridiculous boy!  
You've been dreaming!" Then what gay little screams!  
It had only gone off to the no-land of dreams!  
"Cause, mamma, no chickens that wished to do right,  
Nor turkeys, would *really* run off in the night."

—Margaret Sidney.

## THANKSGIVING.

[Primary Work in the Hazelwood School, 1 B Grade, Anderson, Ind.]

The work which was to lead up to Thanksgiving was begun early in November. The two most important points to be gained were, to awaken a keen sense of gratitude for bountiful blessings, and to lead the pupils to be thoughtful of others less favored than themselves. Incidentally, to teach reading, number and language.

The little people were led to an appreciation of the love and goodness of God through the love and kindness of their parents. In the morning exercises the children talked freely about what their fathers and mothers do for them. The father works and buys a home; provides furniture to make it comfortable and pleasant; buys food and clothing. The mother takes care of the house, cooks the food, makes the clothing, and does countless things for them which they were glad to tell about. In this way the children could appreciate the goodness of God in making it possible for us to enjoy all these blessings.

When the children were ready the work on the Pilgrims was begun by telling briefly of the troubles of the Pilgrims in England, their sojourn in Holland and of their determination to come to America. This occupied two periods set apart for morning talks.

The next morning there was a large drawing of the Mayflower on the blackboard. They were told this was a picture of the boat in which the Pilgrims came. The people on board were talked about and the most prominent characters emphasized. The work of the whole day, so far as possible, supplemented and strengthened the morning lesson. If the morning talk was upon Captain Standish, the reading lessons for that day were upon the same subject. The children drew swords, guns and Puritan hats. They cut four inch squares and folded hats and boats. They sewed an outline of a Puritan hat and built forts of inch cubes.

The following are the subjects in the order in which they were presented: Troubles of the Pilgrims in England, The Sojourn in Holland and their Determination to come to America, The Sailing, The Voyage, The Landing, Miles and Rose Standish, John Alden, Priscilla, The Four Children, The Two Babies,



The First Winter, and The Abundant Harvest the Summer Following. \*

Often one subject would require two or three days to do the reading, number and language which naturally grew out of it.

Little folks are particularly interested in stories of other children, so Mary Chilton, Hope Allerton, Love Brewster and Desire Minter were given due prominence, while the two babies who came to them on the boat, Peregrine White and Oceanus Hopkins were much made of. Later the story of little "Ruth Endicott" published by Harper Brothers in "Little Knights and Ladies," was read to the children. They were also told about the traditional five kernels of corn which were all the Pilgrims had for dinner one cold winter day. Of course all this work was made as real as possible by pictures, drawings and stories.

When this historical work was finished, an hour on Friday afternoon was devoted to producing a sand-table scene. The long sand table was divided into three sections, the middle section being much larger. The right-hand section represented the coast of England and Holland. The left-hand section, the coast of America. The middle section was covered with light blue tissue paper to represent the ocean, and bits of cotton were scattered over the left-hand section for snow. The children brought twigs which were used for trees, and a broad flat stone represented Plymouth Rock. One hundred and one two-inch sticks made quite a crowd of people. (These sticks had been previously counted by the boy with a mathematical turn.) A large paper boat was folded for the Mayflower, and the embarking, the sailing and the landing, were watched with great interest. Two or three wigwams were placed among the trees to remind the children of the friendly Indians. The story of the sufferings and sorrow of the Pilgrims during that first winter was listened to at this point with sober faces. The fort, the houses and the church were built of kindergarten blocks.

Squanto and Samoset were represented by two tall bright colored sticks, and their kind welcome to the Pilgrims was thoroughly appreciated.

This work was left upon the sand table for a few days for the children to talk about and enjoy, and the story of "The First Thanksgiving Day" was told.

On the last Wednesday the little people brought their Thanks-

giving offering, and the sand table was piled high with fruits and vegetables. After school a wagon was brought round to take the good things to homes less favored than ours. Below are some of the reading and number lessons given in connection with the work on Thanksgiving.

Did you ever hear of England?  
It is many miles northeast of us.  
The Pilgrims once lived in England.  
The Pilgrims were brave people.  
They wanted to do what they thought was right.  
The King of England wanted them to obey him.  
So the Pilgrims left England.  
They came across the great ocean.  
They came in a sailboat.  
This sailboat was called the Mayflower.  
The Pilgrims came to America in a pretty boat.  
It had a pretty name, too.  
It's name was Mayflower.  
The Pilgrims had a long ride.  
Oh, it was so cold when they got here.  
The snow was on the ground.  
There were no houses here.  
Poor Pilgrims !

A large drawing of Plymouth rock was placed upon the board and the following lesson in reading given :

This is Plymouth Rock.  
The Pilgrims landed on this rock.  
They landed in December.  
The ground was covered with snow.  
There were no houses.  
At first they lived on the boat.  
The men cut down trees and built log houses.  
The Indians came to see them.  
The Indians brought the Pilgrims corn.  
A little baby was born on the Mayflower.  
His name was Peregrine White.  
He looked like any other baby.  
He could eat and sleep.  
He could cry and crow.

He had such a queer cradle.

This is a picture of it.

Pictures of Miles Standish and Priscilla were gotten out of an old history and were shown to the children.

Miles Standish was the Pilgrim's captain.

He was brave and strong.

This is his picture.

How straight he is.

How long his coat is.

See his queer hat.

How short his trousers are.

This is Priscilla's picture.

Priscilla was brave too.

She did many things for the Pilgrims.

She took care of the sick.

She could spin and cook.

She could sing sweet songs.

She could tell good stories.

The Pilgrims loved Priscilla.

A drawing of a log house accompanied the following :

What a funny house !

Would you like to live in such a house?

It is made of logs.

We call it a log house.

The Pilgrims had to live in log houses.

They cut down trees and built their houses.

The number work consisted chiefly of measuring, cutting and folding.

Three, four and six-inch squares were cut and roofs, hats and boats were folded.

Each child cut four and five-inch sticks and made a log house of sticks and clay.

How many children do you know about that were on the Mayflower? (7.)

How many more boys than girls?

When little Oceanus died how many children were left !

Draw a log house and show all these children playing in the yard.

Draw the Mayflower four inches long and six inches high.—

*Lida Cline Brooks.*

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DESCRIPTION vs. NARRATION FOR PRIMARY WORK.

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There has been some discussion in Primary Language work as to which should come first, description or narration. There seems little doubt but that psychologically considered, description precedes narration and that it is a simpler process. We may say this, that description means seeing an object at some one time and then expressing what we have seen in such a way as to give a good picture of the thing described. All that is necessary is the ability to get hold of a set of facts at one certain time, and the corresponding ability to express them in harmony with some definite end to be reached. But narration means more than this. It means the ability to follow an object through successive stages, to compare and contrast one stage with another and to see the resulting change in the object. For instance, here is a little, white, navy bean. The first process suggested, description, means this, that we must examine this particular bean carefully and then use the necessary language to put before another person exactly the ideas we have gotten from this subject and put them so clearly that he will be able to see pretty definitely just what we have before us. But the narration of this bean may be to see it as it is now, to plant it in the ground, to follow the changes that it undergoes because of heat and moisture and the soil; telling how it sprouts, sends roots into the ground, stem and leaves into the air, later how it blossoms and finally bears fruit. This seems to be, and certainly is in some ways, a more difficult process than the first.

Somebody has well said this, "It is easier to tell what a man does than to tell how he looks." Doubtless most persons agree to this statement. The thing that must determine which of these two processes should come first in our language work is a difficult question, but certainly the child's inclination and interest ought to be considered as helping to point the road. Some helpful suggestions are found from the result of the work of Prof. Earl Barnes, late of Stanford University, and his students. They collected a large number of children's stories and made a careful examination and classification of some of the elements they found. Some features were found to be universal, others strongly marked, while others were strikingly absent. In this mass of stories it was found that first of all and predominating over all else was the

element of action. The element second in importance was that of names and description was fourth. If a line four inches long were made to represent the element of action in these stories, a line a little over a third of this length represents the description. As to the matters of dress and esthetic details and moral qualities, they are very insignificant indeed. If this has any significance whatever in the matter of primary language work, it certainly hints this thing,—that the narrative element is more 'naturally the child's native, home element than is the descriptive. It certainly indicates this, that the child is more interested in the element of action than he is in the details of description. There is no thoughtful primary teacher but has found that the story in which the child is most interested is one in which this element of action is predominant. This is so much so that many stories written for children are modified by the artistic teacher when she gives them, leaving out the greater part of the descriptions and substituting instead the narrative form. She introduces conversations, rapid movement, interesting situations, and less detail of personal appearance, of scenery, of motive. No thoughtful teacher reads "stories" that are not narrative, to her children. But she always selects those in which the element of action is a predominating feature. Does this have any bearing on what should be the nature of the language work of the primary grades?

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### NOVEMBER.

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It is not hard to see how the word, November, comes from an old Roman word *Novem*, which means nine. The old year of Romulus had only ten months. In the reckoning of the months, counting from March, this month was nine. So it was called November.

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"A commonplace life," we say and we sigh,  
But why should we sigh as we say?  
The commonplace sun in the commonplace sky  
Makes up the commonplace day.  
The moon and the stars are commonplace things,  
And the flower that blooms, and the bird that sings.  
But dark were the world, and sad our lot,  
If the flowers should fail, and the sun shine not—  
And God, who studies each separate soul,  
Of our commonplace lives makes his beautiful whole.

—Susan Coolidge.

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## LEND A HAND.

*(This department is conducted by Mrs. E. E. Olcott.)*

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*"Look up and not down,  
Look forward and not back,  
Look out and not in;  
Lend a hand."*

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### A WOODCHUCK STORY.

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Miss Barr had glanced over the next day's history lesson, and noticed a reference to Daniel Webster. From among her mounted biographical clippings, she had selected an anecdote connected with Daniel Webster's boyhood. This she gave next morning to Frank to read.

During the recitation when Webster was mentioned she called on Frank to tell the story. Clearly and with engaging animation, he related: "Once when Daniel Webster was a boy on his father's farm, he and his brother Ezekiel caught a woodchuck which had troubled them for a long time. When at last they had it safe, Ezekiel wished to kill it at once, but Daniel looked at it pitifully. He thought how it had struggled to escape, how it longed to be free, and how sweet life is to the humblest creature, and he proposed to let it go.

"Ezekiel was disgusted at such foolishness, and would not hear of such a thing. Daniel insisted and would not consent to have it killed. While they were disputing about it, their father appeared upon the scene, and they appealed to him. 'You shall each argue the case,' said he, 'and I'll act as judge.'

Ezekiel spoke first. He pointed out that the woodchuck is the farmer's enemy. It is quite destructive, the one before them had done much damage. They had taken time and trouble to capture it. If they released it, it would either return to its burrow on their farm or seek a new home in some neighbor's fields, and continue its depredations. Hence it would not be thrifty nor neighborly nor sensible from any standpoint to release it, and it should be killed.

"Mr. Webster was greatly pleased with Ezekiel's arguments and evidently approved of killing the woodchuck. But he waited to hear Daniel's side of the case.

"Daniel put his whole heart into his pleading. He bade them look at the poor, frightened, little thing. How small and help-

less it was ! How large and strong its captors ! Was it not selfish for human beings who had so much, to begrudge the little that a hapless woodchuck needed ? It asked so little, only air and sunshine, a small space, a bit of food, and blessed freedom. It had done no wanton mischief ; it only took what it needed to eat. Had they any right to begrudge it these, and take away the life which was so sweet to it and which a wise creator had given it—

" Before Daniel had finished, his father said : ' Zeke, you let that woodchuck go ! ' and Daniel Webster had won his first case.

" And," added Frank upon his own responsibility to give a finishing touch to the story, " the happy bird flew away to its home in the woods."

Frank's closing sentence gave Miss Barr a distinct thrill of surprise, but she concealed it perfectly and asked with apparently innocent interest, " Can you describe a woodchuck, Frank ? "

" It's a good-sized bird, with a blood-red head, and black and white body," he replied promptly.

" How many agree with Frank ? " she asked tentatively. Many nodded an affirmative " I do."

Catching a look of dissent, Miss Barr asked, " What do you say, Harry ? " Harry hesitated an instant, then declared stoutly, " I don't think it's a bird at all. I think it is a kind of a squirrel, that has stripes down its back, and lives in old stumps and old logs, and runs along the ground."

There was a decided rustle of surprise. " Quite a difference of opinion," remarked Miss Barr impartially. Then she opened her watch and said impressively : " I wish you to *think* carefully for a full minute, and then tell me whether you are *perfectly sure* that you know what a woodchuck is."

When sixty seconds had ticked away, three-fourths of the class were ready to admit that they could not tell whether a woodchuck was covered with feathers or fur, had two feet or four. Of the remaining fourth, the majority were certain it was a red-headed bird and the rest voted for the squirrel.

" I hope each of you will make himself an investigating committee of one, and try to find out by to-morrow what it was that Daniel Webster and his brother caught," suggested Miss Barr.

On the morrow there was a manifest eagerness to testify on the woodchuck question. Frank had the largest following, and

was doubly sure it was a bird. A man who had lived in the country thirty years, told him he had seen hundreds of woodchucks flying about.

Harry and his constituents took a firm stand for the squirrel. Harry's father, when a boy, had hunted woodchucks himself. They were little stripped squirrels, that made a chipping noise and filled their cheek pouches with acorns.

"Quite a number are keeping their lips closed and looking wise," said Miss Barr smilingly. "What is your opinion, Hugh?"

"A woodchuck is neither a bird nor a squirrel. It's an animal larger than a squirrel. It burrows in the ground or under rocks. In New England, where Daniel Webster lived, it is known as the woodchuck; out west it is called the ground-hog. There is a tradition that on the second of February, each year, the ground-hog comes out of his winter quarters, and if he sees his shadow—which he will if the sun shines during the day—he goes back to sleep again, because there will be six weeks more cold weather. So February 2nd is called Ground-hog Day."

"Hugh's information was met with exclamations of dissent from the bird and squirrel factions, but the ground-hog adherents were enthusiastic. Some of them had consulted an unabridged dictionary, some encyclopedias, others a natural history, and one boy triumphantly brought out an educational paper containing a science lesson on the woodchuck which gave its picture.

"But," urged Frank, "Mr. Day said everybody in the country called those birds woodchucks, and everybody knew them, they were so odd looking."

"Might they not have called them by the wrong name, nevertheless," replied Miss Barr, "if that whole community had called a mule a zebra would it have altered the fact?"

The bird and squirrel adherents surrendered gracefully, and all joined heartily in a plan to celebrate next Ground-hog Day by reciting all they could learn about the woodchuck.

When Miss Barr told about it in teachers' meeting, she added naively, "When the discussion began, I thought a woodchuck was a ground squirrel or a chipmunk myself!"

[The Editor remembers very distinctly a bird answering the above description that was quite common forty or fifty years ago. It resembled in color the woodpecker, but was two or three times its size. It was known as the "woodcock." It is now extinct in Indiana.]



## DESK WORK.

## THE MISSING NUMBERS.

Pretty sticks on the school desks lay,  
And the children longed with them to play,  
They will have to wait without a doubt,  
Till they tell the words in the rhymes left out.

1. Seven red sticks in his hand had Ben,  
He took three more and then had —
2. "I have five times two sticks," said Kate,  
I'll give you two, then I'll have —
3. Fred used — sticks to make a tree,  
He took three away and that left three.
4. Three little butterflies flew toward heaven,  
Four sipped honey still. At first there were —
5. I have — and four, just as many as Hugh ;  
For he has half-a-dozen and two.
6. May has three threes and that is fine ;  
Maud has —, three more than nine.

They received two sticks for each word they could tell,  
Two sticks for each word—and they worked right well.  
How many had each without a doubt,  
If they told every word in the rhymes left out?

## A RHYMING SPELLING LESSON.

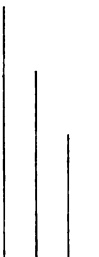
You may have a new kind of spelling lesson to-day. It is a rhyming lesson. I'll give you five words, and you are to write as many words rhyming with each as you can think of. Each one who can think of five for each word—that is twenty-five rhyming words, may place his name on the black board. The pupil who writes the greatest number of correctly spelled rhyming words, may copy his list on the board. Those who have less than twenty words must copy the whole list written by the one who has the most.

This is the list which Lester wrote on the blackboard. More than half of the class had to copy it. Could you have made a longer one?

(look)	(speak)	(green)	(most)	(five)
1. hook	1. sneak	1. seen	1. ghost	1. hive
2. nook	2. freak	2. screen	2. post	2. alive
3. book	3. weak	3. between	3. boast	3. arrive
4. brook	4. week	4. lean	4. roast	4. contrive
5. rook	5. leak	5. mean	5. coast	5. I've
6. cook	6. leek	6. bean		
7. crook	7. creak	7. queen		
8. shook	8. creek	8. magazine		
9. took	9. meek			
	10. cheek			
	11. bleak			
	12. peak			

#### A PAGE FROM SPEER'S PRIMARY ARITHMETIC.

Draw lines on the blackboard 1 ft., 9 in., 6 in., 3 in. long. Teach the names of the lines.

- 
1. What is the name of the longest line? Of the shortest? Of the line that is  $\frac{1}{2}$  ft. long? Of the line that is  $\frac{3}{4}$  ft. long?
  2. Name the lines in order, beginning with the shortest. Repeat. Name in order beginning with the longest.
  3. Make sentences like this: The sum of 6 in. and 3 in. equals 9 in.
  4. The 3-in line equals what part of each of the other lines?
  5. The 6-in. line equals how many times the 3-in. line? It equals what part of each of the other lines?
  6. Compare the 6-in. line with each of the other lines again.
  7. The 9-in. line equals how many times the 3-in. line? It equals how many halves of the 6-in. line. It equals what part of a foot?
  8. The foot equals how many times the 3-in. line? It equals how many times the 6-in. line? Show  $\frac{1}{3}$  of the 9-in. line. The foot is as long as how many thirds of the 9-in. line? It equals how many thirds of the 9-in. line?
  9. A foot is how many times as long as 6 inches? A foot is how much longer than 6 inches? 6 inches equals what part of a foot? 4 inches equals what part of a foot? A foot equals how many 4-inches? What part of a foot is as long as 8 inches?

10. What is  $\frac{1}{4}$  ft.? What is  $\frac{1}{2}$  ft.? What is  $\frac{3}{4}$  ft.? What is  $\frac{1}{2}$  of 6 in.? What is  $\frac{1}{3}$  of 9 in.? What is  $\frac{2}{3}$  of 9 in.? What is  $\frac{3}{4}$  of a ft.? What is  $\frac{1}{2}$  of 6 in.? What is  $\frac{1}{3}$  of 9 in.? What is  $\frac{2}{3}$  of 9 in.? What is  $\frac{3}{4}$  of a ft.? Picture the lines in your mind and tell all you can about them.

Review without observing the lines.—*Speer's Primary Arithmetic, Ginn & Co.*

## PROGRAM FOR THANKSGIVING DAY.

### 1. SONG.....Air—Come Thou Fount of Every Blessing

To the Giver of all blessings	For the wealth of golden harvests,
Let our voices rise in praise	For the sunlight and the rain,
For the joys and countless mercies	For the grandeur of the ocean,
He hath sent to crown our days;	For the mountain and the plain,
For the homes of peace and plenty,	For the ever changing seasons,
And a land so fair and wide,	And the comforts which they bring,
For the labor of the noonday,	For thy love so grand, eternal,
And the rest of eventide.	We would thank Thee, O our King.

—*Wm. G Park.*

### 2. READING OF THE PRESIDENT'S PROCLAMATION.

### 3. RECITATION.....The Reason Why

We learn it all in history—you didn't think I knew?  
 Why don't you suppose I study my lessons? *Course* I do.  
 The Pilgrim Fathers did it, they made Thanksgiving Day.  
 Why? Oh, I don't remember; my history doesn't say,  
 Or p'rhaps I wasn't listening when she was telling why;  
 But if the Pilgrim mothers were busy making pie,  
 I s'pose they couldn't bother and so that was the way  
 It happened that the *Fathers* made our Thanksgiving Day.

—*Selected.*

### 4. RECITATION.....John White's Thanksgiving

"Thanksgiving!—for what?"—and he muttered a curse—  
 "For the plainest of food and an empty purse;  
 For a life of hard work and the shabbiest clothes!  
 But it's idle to talk of a poor man's woes!  
 Let the rich give thanks; it's they who can;  
 There is nothing in life for a laboring man."

So said John White to his good wife Jane,  
 And o'er her face stole a look of pain.

"Nothing, dear John? and he thought again;  
 Then glanced more kindly down on Jane.  
 "I was wrong," he said; "I'd forgotten you;  
 And I've my health, and the baby too."

And the baby crowed—'twas a bouncing boy—  
 And o'er Jane's face came a look of joy ;  
 And she kissed her John as he went away :  
 And he said to himself as he worked that day ;  
 " I was wrong, very wrong ; I'll not grumble again,  
 I should surely be thankful for baby and Jane.—*Selected.*

5. RECITATION ..... A Boy's Opinion

Oh, Valentine day is well enough,  
 And Fourth of July is jolly,  
 And Christmas time is beautiful,  
 With its gifts and wreaths of holly.  
 New Year's calling is rather nice,  
 And Hallowe'en sports are funny,  
 And a May-day party isn't bad,  
 When the weather is warm and sunny.  
 Oh, all of them are well enough ;  
 But the day that is best worth living  
 Is when we all go to grandmamma's,  
 To a splendid, big Thanksgiving.

—*Emma C. Dowd.*

6. READING..... Polly's Thanksgiving

Such a funny little roly-poly Polly as she was, with her big china-blue eyes that were forever seeing something to wonder about, and her round, red cheeks that always grew redder when anybody spoke to her, and her crinkly flaxen hair that never would stay in place ! Such a queer little dumpling of a Polly !

All the same, she liked nice things to eat as well as any one could, and when, once upon a time, somebody gave her the measles just in season for Thanksgiving Day, she felt dreadfully about it, and cried as hard as she knew how because she couldn't have any turkey, nor pudding, nor mince-pie for dinner—nothing at all but oatmeal gruel.

But crying didn't help the measles a mite, as of course Polly knew it wouldn't, but she couldn't have helped crying if she wanted to, and she didn't want to.

" 'Most anybody'd cried, I wouldn't wonder," she said, a day or two after, when the measles had begun to go away again, " not to have a mite of any Thanksgiving for dinner, not any pie, not any cranb'ry sauce, not any—O de-ar ! "

" Well, well," said Polly's mother, laughing, " I guess we'll have to have another Thanksgiving Day right off."

" Oh ! can we ? " cried Polly, brightening up.

" Not unless the governor says so," answered her father with a twinkle. " The governor makes Thanksgiving Days, Polyanthus."

" Where does he live ? " asked Polly, with an earnestness that was funny. Everybody laughed.

"At the capital," said Polly's Uncle Ben Davis. "Do you know where that is?"

"I guess I do," said Polly, and she asked no more questions.

But what do you guess this funny Polly did? By and by, when she felt quite like herself again, she borrowed pencil and paper and shut herself up in her own little room and wrote a letter that looked a little queer, 'tis true, but still made her wishes known.

"DeRe MiSTeR GUVNER WILL yOu PLeAsE MAKE AnOThEr THANKS-GIVING DAY be CAWS I HAD THE MEESLES THE LAST ONE.

POLLY PINKHAM."

Then she folded the letter and put it in an envelope, with one of her chromo cards, and sealed it, and took two cents out of her bank for the postage and ran away to the post-office as fast as she could run.

Mr. Wiley kept the postoffice, and if he himself had been behind the glass boxes that day, I don't believe Polly's letter ever would have gone out of Tinkerville. But Mr. Wiley's niece was there. She read the address on the envelope Polly handed in, and her eyes danced. It looked so funny:

MESTER GUVNER, AT THE CAPITL'E."

One or two questions brought out the whole story.

"The governor shall have your letter, Polly," roguish Miss Molly said, with a laugh, as she stamped it, and wrote the postmark plain as plain could be.

And so it did. For, not quite a week later a letter came in the mail to Polly—a great white letter, with a picture in one corner, that made Polly's father open his eyes.

"Why, it's the State's arms," said he. "What under the sun—"

But I think he suspected. Oh! how red Polly's cheeks were, and how her small fingers trembled when she tore open her letter. It was printed so that she could read it herself, all but the long words:

"DEAR MISS POLLY :—Your letter received. I am very sorry you were so ill as not to be able to eat any Thanksgiving dinner. It was quite too bad. I hereby appoint a special Thanksgiving Day for you—next Thursday, December 9th,—which I trust may be kept with due form. Your friend and well-wisher,

ANDREW COLBURN."

"Oh! oh! oh!" cried Polly, hopping on one foot; "will you, mother? O mother will you? I wrote to him myself, Oh! I'm so glad."

"Did you ever!" cried Polly's mother. "Why, Polly Pinkham!" But Polly's father slapped his knee, and laughed.

"Good for Governor Colburn! I'll vote for him as long as he wants a vote. And Polly shall have a special Thanksgiving worth telling of, so she shall."

So she did have the very best she ever remembered.—A. C. Stoddard, in the *Western Journal of Education*.

## 8. RECITATION.....Elsie's Thanksgiving

Dolly, it's almost Thanksgiving ; do you know what that means, my dear?  
 No? Well, I couldn't expect it ; you haven't been with us a year,  
 And you came with my auntie from Paris, far over the wide blue sea,  
 And you'll keep your first Thanksgiving, my beautiful Dolly, with me.

I'll tell you about it, my darling, for grandma's explained it all,  
 So that I understand why Thanksgiving always comes late in the fall,  
 When the nuts and the apples are gathered, and the work in the field is done,  
 And the fields, all reaped and silent, are asleep in the autumn sun.

It is then that we praise Our Father who sends the rain and the dew,  
 Whose wonderful loving kindness is every morning new.  
 Unless we'd be heathen, Dolly, or worse, we must sing and pray,  
 And think about good things, Dolly, when we keep Thanksgiving Day.

But I like it very much better when from church we all go home,  
 And the married brothers and sisters and the troops of cousins come,  
 And we're ever so long at the table, and dance and shout and play  
 In the merry evening, Dolly, that ends Thanksgiving Day.

—Margaret E. Sangster.

## 9. RECITATION.....That Things Are no Worse, Sire

From the time of our old Revolution,  
 When we threw off the yoke of the King,  
 Has descended this phrase to remember,  
 To remember, to say, and to sing ;  
 'Tis a phrase that is full of a lesson,  
 It can comfort and warm like a fire,  
 It can cheer us when days are the darkest !  
 " That things are no worse, O my Sire."

'Twas King George's Prime Minister said it,  
 To the King who had questioned in heat  
 What he meant by appointing Thanksgiving?  
 In such days of ill luck and defeat ;  
 " What's the cause of your day of Thanksgiving?  
 Tell me pray," cried the king in his ire ;  
 Said the Minister, " This is the reason—  
 That things are no worse, O my Sire."

There has nothing come down in the story,  
 Of the answer returned by the King ;  
 But I think on his throne he sat silent,  
 And confessed it a sensible thing ;  
 For there's never a burden so heavy  
 That it might not be heavier still ;  
 There is never so bitter a sorrow,  
 That the cup could not fuller fill.

And what of care and of sadness  
 Our life and our duties may bring.  
 There is always the cause for Thanksgiving  
 Which the Minister told to the King,  
 'Tis a lesson to sing and remember ;  
 It can comfort and warm like a fire,  
 Can cheer us when days are the darkest,  
 " That things are no worse, O my Sire."

—Helen Hunt Jackson.

QUOTATIONS :—

[To be given standing at the seat.]

10. It is the Puritan's Thanksgiving eve,  
 And gathered home from fresher homes around,  
 The old man's children keep the holiday,  
 In dear New England since the father's slept,  
 The sweetest holiday of all the year.—J. G. Holland.
11. Some hae meat that can not eat,  
 And some would eat that want it ;  
 But we hae meat and we can eat,  
 Sae let the Lord be thanket.—Robert Burns.
12. " Ah ! on Thanksgiving Day, when from East and from West,  
 From North and from South, came the pilgrim and guest ;  
 When the gray haired New Englander sees round his board  
 The old broken links of affection restored,  
 When the care-wearied man seeks his mother once more,  
 And the worn matron smiles where the girl smiled before,  
 What moistens the lip and what brightens the eye,  
 What calls back the past like the rich pumpkin pie."  
 —From " The Pumpkin," by J. G. Whittier.
13. " For the soul grows rich in giving,  
 All its wealth is living gain,  
 Seeds that mildew in the garner,  
 Scattered, fill with gold the plain."
14. All gracious and tender associations cluster around our Thanksgiving Day. It is the flower of the year, beautiful with the glow of unnumbered homes and hearthstones, fragrant with the dearest of memories. Home loves and joys seem never quite so warm, so bright, so precious, as on that day. Nature's bounty seems at no other time so full and so sweet, while all the happiness of the day reminds us of the gracious constancy of God's providence.
15. " The buds may blow and the fruit may grow,  
 And the autumn leaves drop crisp and sere ;  
 But whether the sun, or the rain, or the snow,  
 There is ever a song somewhere, my dear."—Riley.

16. I think the treasures of God  
 Are never far away ;  
 We do not see them, yet we are  
 Anear them every day.  
 Out of the chambers of the skies  
 Come sun and dew and rain,  
 To feed the hungry nations through  
 The alembic of the grain.
17. But whether from the smiling skies,  
 Or in the springing wheat,  
 Or through men's hands or hearts, are given  
 The gifts our need that meet—  
 Straight from the hand and heart of God  
 They always come to us ;  
 It is his wealth, it is his love,  
 Guarded and given thus.

18. The first national Thanksgiving proclamations were by Congress during the Revolutionary War.

The first great American Thanksgiving Day was in 1784, for the declaration of peace. There was one more national thanksgiving in 1789, and no other till 1863, when President Lincoln issued a national proclamation for a day of thanksgiving. Since that time the President has issued an annual proclamation.

19. RECITATION :—

*[By a small boy who can whistle.]*

You've thanked for fruits and summer bowers,  
 For grasses, trees, and lovely flowers,  
 From grand magnolias to the thistle ;  
 I'm thankful 'cause I've learned to whistle.—*Selected.*  
*[Whistles "Yankee Doodle," or "Dixie."]*

20. SINGING.....Doxology

[Don't forget to have the children bring gifts of food, clothing or money for those less fortunate than themselves. This is one of the blessings of Thanksgiving.]

EACH of our moral, intellectual and physical powers must depend for its development upon itself alone and not on any artificial external influences. Faith must proceed from faith ; thought must proceed from thought ; love must proceed from love ; art, too, must proceed from actual art and skill, and not from endless discussions about them. And this return to the true method of nature for the development of our powers requires the work of education to be subordinated to the knowledge of the various laws which control those powers.



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## EDITORIAL.

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### THANKSGIVING.

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THE JOURNAL believes very thoroughly in observing special days. Life for most people is monotonous, and it helps things wonderfully to observe in a proper way the anniversaries of important events. At home the anniversaries of all birthdays, should be religiously observed. Add to these such other special days as may be possible. Of course, Thanksgiving and Christmas will be observed. In school a wider range can be profitably taken, according to location and taste of the teacher. In many schools a list of important events is made by the superintendent and all the schools recognize these by appropriate exercises.

If the teacher is wise and plans for these exercises several weeks in advance, the children can be given much valuable information, they may do much reading for themselves, they will be much interested and all necessary preparation may be made without any interruption of the regular school work.

Thanksgiving is the event of special interest for November. The origin, history, purpose and spirit of this observance can be impressed by giving a little at a time and having as far as possible all general exercises point to this event.

The thought to keep most prominently before the children should be "unselfishness." Urge that every one before sitting down to enjoy a bountiful Thanksgiving dinner shall do something toward furnishing some one poorer than himself a dinner. It is a custom in many cities to take up collections in the schools for the benefit of the poor. In order that *all* may take part in these contributions each child is asked to bring one potato or one apple, and those who choose may bring more. In this way will be collected much which the Benevolent Society distributes. But individual distributions are preferable.

I once heard a minister say to his congregation, "Just as far as possible let each one before he sits down to his own Thanksgiving dinner provide a dinner or some part of it for some poor family." And then he added that if any one did not know of a family to whom a good dinner would be a luxury just give him the money and he would find the family. Each teacher must be the judge as to what will be proper in the community in which he lives.

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### THE PUBLIC SCHOOL SYSTEM.

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Every now and then some bold, enquiring person rises to ask, "Why should I support this elaborate public school system? I have no children to be educated in them and so I am compelled to pay out a large sum of money in the course of my tax-paying career without receiving any return." Promptly comes from every side the reply, "But you do receive a return. It is greatly to your interest that the state should be composed of good citizens, and to that end the public schools were founded, for that are they supported,

and on that ground alone can the constant extension of their curriculum be defended." The bold, enquiring person usually recognizes the conclusive character of this reply and immediately subsides. The answer is truly final and, moreover, implies several things of which we are not in the habit of thinking. If the schools exist as a defense of the state, then the teachers are defenders of the state. Like other defenders of the state they give the best of their lives to the service. They usually spend years in preparation for the work which demands force of character, executive ability and intelligence, and is of a peculiarly nerve-destroying nature. Like the other defenders of the state their pay is not sufficient to enable them to provide against the evil days of illness, disability, old age; but unlike the other defenders of the state there is for them no pension, no day of retirement on half pay. Why should this be? In other countries and in some places in this country retirement funds have been established. Would it not be well for Indiana, whose school system is her pride to look about and see if she is not falling behind in this matter and failing to do justice to a class of citizens to whom she owes much and whom she delights to honor?—*The Ishmaelite*.

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#### INDIANA SCHOOL LAWS.

State Superintendent Geeting has just issued a new compilation of the school laws of this State. His introduction is a historical sketch of our school system. The school legislation and the school laws are then discussed in the light of this history. All the laws bearing on any given subject are collected and logically arranged. The laws are grouped under the following heads:

"Constitutional provisions; superintendent of public instruction; State Board of Education; school books; county superintendent; County Board of Education; administration; taxation; enumeration; apportionment of revenue; schools in cities and towns; school system in large cities; schools and school houses; teachers' institutes; free libraries; general provisions; compulsory education; the fund; State Normal School; Indiana University; Purdue University; tax for Indiana and Purdue Universities and State Normal School; the State Library"

Mr. Geeting has spent much time on this work and has succeeded in combining all the good points of former editions and adding several new and important features. His historical sketch is exceedingly interesting, and his very full table of contents and his voluminous index are invaluable to any one wishing to look up points in the law. The sections are numbered consecutively as the matter is arranged, but at the end of each section can be found its section number in the Revised Statutes of 1881, of 1894 and of 1897. He deserves much credit for this most complete edition of our school laws.

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#### WORKING OF THE COMPULSORY LAW.

The new compulsory education law seems to be giving general satisfaction. The mere fact that there is such a law has had the effect to start many children to school. Careless, indifferent people knowing of the law and

fearing its enforcement have simply sent their children to schools without waiting for a visit from the truant officer. The State Superintendent has from the first advised moderation and kindness. He is of the opinion that it will be better to be lenient in the enforcement of the law, rather than make enemies to it before it has been thoroughly tested. In this he is certainly right. The truant officers should as far as possible *persuade* people to send their children to school. After the law has been tested and its weak places amended, and the people have become accustomed to it, it can be more rigidly enforced. The popularity of the law will depend largely upon the good sense and tact of the truant officers. The school attendance has been largely increased all over the State. Just how much of this increase is due to the new law is difficult to say. State Superintendent Geeting estimates it at 25,000. No city has yet established a "Parental Home" for incorrigible children. This is an important feature of the law, but it is well to defer its application, both on account of its danger to abuse and its expense. On the whole the law is well received and is making a favorable impresson.

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#### THE MOST ESSENTIAL QUALIFICATION OF A TEACHER.

The story is that Socrates first met Xenophon in a narrow lane, and putting forth his staff, stopped him. "Tell me," began Socrates, "Where does a man buy meal?" "In the market place," was the answer. "And oil?" "In the same place." "But where does one go to become wise?" The youth was silent. "Follow me," said the sage, "and I will tell you."

The greatest educative force is individuality. No influence can equal that which comes from master upon disciple, and, as it is the true man alone who can be the true teacher, so the first requisite in the teacher is himself to be a man, and the first principle which should dominate all training of teachers is to cultivate freedom in the individuality. This has been the weak point of the normal training of the past; method, method, method, but no man behind the method. Machine methods of teaching can only make machine scholars. They sap the vitality of teachers and pupils alike. And yet method is indispensable to all success, but only living method, and in the hands of a man who has assimilated it, made it his own, put his own life into it.—*Selected.*

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ATTENTION is specially called to "Plato's Educational Ideas" on another page, by Arnold Tompkins. It is just what teachers need to read in connection with their study of "Plato The Teacher." The article on "Studying a Continent," by Alexander Frye, the author of Frye's Geographies, will be appreciated by all who take part in the township institute work.

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ALL books are divisible into two classes, the books of the hour and the books of all time. Mark this distinction—it is not one of quality only. It is not merely the bad book that does not last, and the good one that does. It is a distinction of species. There are good books for the hour and good books for all time; bad books for the hour and bad books for all time.—*John Ruskin.*

## QUESTIONS AND ANSWERS.

### STATE BOARD QUESTIONS USED IN SEPTEMBER.

#### UNITED STATES HISTORY.

1. *Should U. S. History be taught in the first four years of our school course? Give reasons for your answer.*

Why not? History is a story—a true story—and truth is stranger and more captivating than fiction; besides, children love stories, remember them easily, and soon learn to tell them with much zest and interest. Very many of the best stories that set forth prominent facts and ideas of our country's history are strongly imbued with patriotism. Many biographies are practical illustrations of noble and sturdy elements of character. Our schools cannot work on lines grander than patriotism and character. It is wise—very wise—to bring them in close contact with the lives of the future citizens of our country.

[There are two theories as to the subject matter that should constitute the work in history for the first four years of school life:—(a) One would begin with the Aryan race and trace the course of human events down to the voyage of Columbus. (b) One would begin with the voyage of Columbus and set forth the incidents and struggles connected with the growth of affairs in our land. It is taken for granted that a clear, concise statement setting forth a brief view of the condition of European affairs is desirable at the beginning of primary lessons in U. S. History—but it is not necessary. With advanced students who are able to trace the ideas of cause and effect, etc., such a course is the ideal one; but in the primary history work, to give nothing but Asiatic and European history for the first four years of a child's school life would be a shameful blunder.]

2. *With what parts of U. S. History would you begin with young pupils? Give reason for your answer.*

With stories about how our people lived; about what they did in their various affairs—religious, educational, industrial and political—during the times of the early settlements and the formation of the colonies; and about our great and good men. (See answer to 1.)

3. *Give a brief biography of Lincoln.*

Abraham Lincoln was born in Kentucky, February 12, 1809, of poor parents, and emigrated with them to Indiana, and thence to Illinois, where he found work as a farm hand, rail splitter, and Mississippi boatman. By hard work and perseverance, he educated himself, became a lawyer, and served as representative in Congress (Whig), 1847-49. In 1858, he had become known as one of the ablest men in Illinois and was nominated by the Republicans for United States Senator against Douglas; and, though Illinois was then a Democratic state, Douglas barely escaped defeat. Lincoln was still little known outside of Illinois; and when he was elected president in 1860, there was a very wide belief in the North that the "rail-splitter" was a wild, reckless and dangerous man. In the South it was even reported that he was a mulatto (and Hamlin a full-blooded negro),

elected as an insult to the Southerners. The people of both sections learned to know him better before his death in 1865. His best known writings are the Emancipation Proclamation and the Gettysburg Address.

4. *Name five books which you consider well adapted to awaken in the minds of young people a love for U. S. History.*

Montgomery's Elementary History; "Stories of Colonial Children;" Eggleston's Primary History; "Stories of Great Americans for Little Americans;" and "Children's stories in American History," (by Henrietta C. Wright).

5. *Contrast the modes of living in New England in the colonial times and at the present time.*

In the colonial times most of the people were English. Their mode of living was constantly modeled in accordance with the strictness connected with Puritan ideas. Puritan thought and belief permeated every institution. The nature of their environment—the physical geography of the country—had its influence in establishing among them habits of frugality and industry. While they were democratic in government, they were intolerant in religion. At present, New England has a large percentage of nationalities other than English. The spirit of tolerance pervades the people in all their affairs; and in regard to home and business life generally, the contrast between the colonial period and the present time is very fully brought out in McMaster's School History from which we quote the following: "Had a traveler landed on our shores in 1763 and made a journey through the English colonies in America, he would have seen a country utterly unlike the United States of to-day. The entire population, white man and black, freedman and slave, was not so great as that of New York or Philadelphia or Chicago in our time. If we were to write a list of all the things we now consider as real necessities of daily life and mark off those unknown to the men of 1763, not one quarter would remain. No man in the country had ever seen a stove, or a furnace, or a friction match, or an envelope, or a piece of mineral coal. From the farmer we should have to take the reaper, the drill, the mowing machine and every kind of improved rake and plow, and give him back the scythe, the cradle and the flail. From our houses would go the sewing machine, the daily newspaper, gas and running water; and from our tables, the tomato, the cauliflower, the eggplant, and many varieties of summer fruits. We should have to destroy every railroad, every steamboat, every factory and mill, pull down every line of telegraph, silence every telephone, put out every electric light and tear up every telegraphic cable from the beds of innumerable rivers and seas. We should have to take ether and chloroform from the surgeon, and galvanized iron and India rubber from the arts, and give up every sort of machine moved by steam."

6. *What relations are there in the teaching of geography and history?*

The simplest relation is that of locality—the *where* of an event. The most important relation is the effect of locality and environment on the life or story of a people. The latter affords one of the most interesting lines of investigation that can be found in the whole field of knowledge.

7. *Give an account of the invention of the cotton-gin and of its effect upon the subsequent history of the United States.*

Before cotton can be spun and woven into cloth, the cotton-fiber must be separated from the cotton seed. This was formerly done by hand, and was such a tedious task that one person could separate but a small quantity of the cotton-fiber in a day. The widow of General Greene, of Revolutionary fame suggested to a young Yankee schoolmaster, Eli Whitney, who was at the time teaching in the south, the possibility of making a machine to do the work. The cotton-gin invented by Whitney in 1793 was the result. The machine is quite simple, but it wrought a tremendous revolution in the production of cotton and in the political complication in the United States. Cotton could now, by the aid of the machine, be produced at a great profit by means of slave labor.

Washington and Jefferson had hoped that slavery would disappear from the nation, and it probably would have done so had it not been that slave labor became so profitable. In all the cotton-growing states along the south Atlantic and the Gulf coasts, slavery became strongly entrenched. Nothing but the moral cyclone that ended in the Civil War could overthrow it.

#### SCIENCE OF EDUCATION.

1. *Why is it that nearly all the experiences of the first few years fade out of the mind and can not be recalled in later years?*

Because they do not make a deep impression upon the mind by reason of its abundant vivacity, cheerfulness, and constant "castle-building."

2. *Why do we remember what we write better than what we simply read?*

When two senses are involved instead of one, a more lasting impression is made upon the mind.

3. *Which of the senses furnish the most vivid and lasting memory images?*

Sight and hearing.

4. *What are the chief laws of association?*

The law of association is three-fold—(a) the law of similarity; (b) the law of contiguity in time and place; (c) and the law of cause and effect.

5. *What are some of the evidences that the young child has the idea of cause and effect?*

His interrogative nature and his ("why?").

6. *Which form of imagination, active or passive, is predominant with children in their early years?*

This question is indefinite. In a general sense, the answer is active.

7. *Does the child think in the particular or in the general? Give reasons for your answer.*

He is very apt to think in the general. From one particular, a child will often make a generalization that is very apt to be erroneous. It is caused by his lack of experience, practical observation and knowledge.

## READING.

1. Compare the style of "The Great Stone Face" with that of "The Vision of Sir Launfal."

One is verse, the other is prose. In "The Great Stone Face," we have Hawthorne's usual vivid narrative style. In "The Vision of Sir Launfal," we note both a sublime and a descriptive style.

2. Who wrote "The Great Stone Face?" Give brief biography. Name five other writings of his.

Nathaniel Hawthorne was born in Salem, Mass., July 4, 1804. His father, a shipmaster, died in Havana when the future author was six years old. At the age of ten, on account of feeble health, he was sent to live on a farm in Maine. He entered Bowdoin College, and received his degree in 1825. His first publication was a collection of stories he had written for periodicals, entitled "Twice-Told Tales." From 1838 to 1841 he held a subordinate office in the Boston custom-house. In 1846 he was appointed surveyor of the port of Salem, and, while residing there, wrote the romance which established his reputation. This was "The Scarlet Letter," probably the most imaginative, picturesque and powerful work of the kind in this century. In 1849, having lost his office by the change in politics, he removed to Lenox, where he wrote "The House of the Seven Gables," which appeared in 1851. In 1860, he published "The Marble Faun," and in 1863, "Our Old Home." He wrote also, at different times, several juvenile works, among which are, "The Snow Image," "The Wonder Book," "Tanglewood Tales," and "True Stories from History and Biography." He died at Plymouth, N. H., May 19, 1864.

3. What is the theme of the selection? The embodiment?

The development of nobleness of character through the influence of constant contemplation of a noble ideal. The character of Ernest.

4. What, in your judgment, makes Ernest such a strong character? His simplicity, earnestness and artlessness.

6. Give brief analysis of selection.

(a) The legend that there should return to a certain valley one of its former inhabitants, who would resemble the "great stone face." (b) Ernest's great interest in the face, his constant meditation of the legend, and his watchfulness for its fulfilment. (c) The coming of the different persons each of whom was thought by many to be the true hero, and the successive failure of each. (d) The keen and true discernment of the poet, that Ernest himself is the true hero, whose face has grown to resemble the "great stone face."

## GRAMMAR.

1. In studying the sentence, why is it necessary to study the thought which it expresses? Show the advantage of understanding the thought or judgment in studying grammar. Illustrate fully.

The structure of the sentence depends on the thought. The leading or central idea in the sentence is enlarged or restricted according to the purpose of the speaker, and these modifications are brought about by the use

of appropriate words. Hence the nature of the thought to be conveyed determines the nature of the words to be used. When one understands the thought, he can readily understand the nature of the words that compose it, those that make up the principal elements—and those that modify them. (See grammars for many illustrations.)

2. *What connective words join the adjective clause to the part of the sentence which it modifies? Illustrate in sentences.*

- (a) The relative pronoun; as, "She is not mad who kneels to thee."  
 (b) The compound relative pronoun; as, "I will employ whoever is capable."  
 (c) The relative adverb; as, "Yonder is the place where he is buried."

3. *Explain the difference between a complex and a compound sentence. Illustrate.*

In a complex sentence the main members are of unequal rank; as, "Regulus gladly gave up his life that he might save his country." In a compound sentence the main members are of equal rank; as, "The rain descended and the winds blew."

4. *What is the rule for the position of I, you and he when used co-ordinately in the same sentence? Why?*

In using two or more pronouns of different persons, the third person should precede the first and the second should precede the first and third; as, "You, he and I received the honors." It is courteous to say, "I and you deserve the blame."

5. *Write five sentences in which the verbs have both direct and indirect objective modifiers. Indicate the examples.*

- (a) Prepare them a place. (b) He took her a shawl. (c) God grant them a happy time. (d) I found him a situation. (e) My friend ordered them a carriage.

*Give the use of each italicised word in the following: Many a soldier fell bravely fighting for the right.*

(a) "Many a" is an adjective modifier of "soldier;" (b) "fell" is a finite verb used to express the chief part of the assertion; (c) "bravely" is an adverb used to modify the verb, "fell;" (d) "fighting" is a present active participle used as a predicate adjective referring to the subject; (e) "right" is a noun, the object of the preposition "for."

7. *Punctuate and capitalize: whatever happens exclaims mary i am the wife of the king of spain crown rank life all shall go before i take any other husband*

"Whatever happens," exclaims Mary, "I am the wife of the king of Spain; crown, rank, life—all shall go before I take any other husband."

#### GEOGRAPHY.

1. *What factors influence and determine climate?*

Latitude, altitude, prevailing winds, and proximity to the sea and to mountains.

2. *Why is the climate of lands bordering on the sea less severe and more nearly uniform than the climate of the interior portions of continents in the same latitude?*



Because the sea does not change its degree of temperature suddenly. It rises more slowly and falls more slowly than does the temperature of the land. For a certain amount of water to be raised one degree in temperature requires more heat than the same amount of land would require. The circulation of the waters of the sea prevents a sudden change of temperature, and aids in distributing the heat received.

3. *What are astronomical zones? How determined? Isothermal zones? How determined?*

a). Those bounded by the tropics and polar circles; they are determined by the inclination of the earth's axis to the plane of its orbit.

(b). Those bounded by isothermal lines, *i. e.*, lines of equal mean annual temperature; they are determined by everything that determines climate. (See 1).

4. (a) *Name the principal sources of the world's supply of cotton.*

(b) *What physical conditions are necessary to the profitable cultivation of the cotton plant?*

(a) United States, India, Egypt, and Brazil.

(b) A fertile soil, much heat and moisture, and a long season.

5. *Turkey—Locate and give its extent, form of government, approximate population, prevailing religion.*

Turkey lies north and east of the eastern half of the Mediterranean Sea. Its total area is 842,600 square miles, and its total population is about 35,000,000. "Turkey is essentially a theocratic absolute monarchy, being subject in principle to the direct personal control of the sultan, who is himself at once a temporal autocrat and the recognized caliph *i. e.*, successor of the Prophet, and consequently the spiritual head of the Moslem world." The religion is Mohammedanism.

6. (a) *What commercial and political advantages, if any, would the possession of the Sandwich Islands give the United States?*

(b) *What is the present form of government of the Sandwich Islands?*

(a) Commercial advantage would be gained in the additional amount of sugar, etc., over which the United States would have control. The alleged political advantage is the possession of a spot in the Pacific that might serve as a harbor and as a depot of supplies in case of a foreign war.

(b) A republic.

#### SCIENTIFIC TEMPERANCE.

1. *Discuss with a reasonable degree of fullness the effects of alcohol on the nerve-centers.*

Here, as every where else, alcohol robs the tissues of its water. The solid parts, cells and fibres, are reduced in size, are partially changed in form and their natural functions are greatly impaired. The nerve cells become congested and undergo fatty changes.

2. *In like manner describe its effect on the kidneys.*

*Local action.* 1. Irritation of lining of tubes (uriniferous tubes). 2. Causes enlargement of the kidneys. 3. Also contraction similar to effects on the liver. 4. Induces one of the forms of Bright's Disease.

*Remote action.* (a) Prevents tissue changes. (b) Tissue waste collects in the blood (urea). (c) Blood is impoverished. (d) Albumen of the blood (in Bright's Disease) drained away. (e) Skin becomes yellow and pinched; the entire system debilitated; heart disease is not infrequent. (f) Dropsy.

3. *How does the excessive use of tobacco affect the heart and the blood? Which is the more injurious, excessive chewing or excessive smoking?*

Tobacco induces changes in the blood-corpuscles. In smoking, carbonic acid, carbonic oxide, several ammonias, and crude nicotin are drawn into the air passages. Portions of the two latter enter the blood current, circulate with the blood, work mischief with the nerve-centers, and the innervation of the heart is disturbed. The latter part of the question is debatable, and its answer depends upon circumstances.

4. *What dangers attend the frequent administering of sleep-producing narcotics?*

It induces in the system a condition such that sleep cannot be had without the use of narcotics. And when not under the influence, the person is irritable, excitable, and sometimes subject to various pains.

5. *What is the testimony of arctic explorers regarding the heat-producing qualities of alcohol?*

That it has no heat-producing qualities, and that it actually lowers the temperature.

6. *What is the value of chocolate as a drink? What is the active principle of chocolate? What does the name signify?*

Chocolate, as a food, is better than coffee or tea, as it contains fatty, albuminous and starchy materials; its active principle is *theobromine*. It is from the Mexican name of cacao.

7. *How would you demonstrate to a class that alcohol is an absorbent of water? How prove that beer contains alcohol?*

(a) Put a piece of fresh beef in alcohol, and let it remain some hours. The fibers will harden and the piece of meat will shrink, because the water has been drawn out by the alcohol. (b) By repeated distillation.

#### PHYSIOLOGY.

1. *How are the bones repaired?*

Tubes known as the *Haversian canals* ramify all through the bone, running mainly in the direction of its long axis, but united by numerous cross or oblique branches as seen in the longitudinal section. The outermost ones open on the surface of the bone beneath the periosteum, and in the living bone, blood vessels run from this through the Haversian canals and convey material for its growth and nourishment; from this nourishment the bone cells are furnished with the proper substances necessary for repair.

2. *What relation exists between muscular exercise and nutrition?*

Muscular work is not done through the energy liberated by proteid oxidation. A muscle works by the oxidation of carbon and hydrogen and the proteid constituents of the living muscle substance are essentially the machinery determining in what way the energy shall be spent. A muscle takes up from the blood oxygen, proteids and non-nitrogenous substances.

These it builds up into a highly complex and very unstable compound. When the muscle is stimulated this falls down into simpler substances in which stronger affinities are satisfied; among these are carbon dioxide and sarcolactic acid and a proteid (myosinogen).

3. *Suggest some simple experiment to show that mastication assists digestion.*

Take two tea-cups each partly full of a semi-fluid mass of bread and water, and in one put some finely divided bread-crust crumbs and in the other put a piece of bread-crust the size of a dollar; then note how much sooner the finely divided crumbs become soft than the piece of crust. This shows the importance of mastication.

4. *What is a gland? Name some of the more important glands and give their uses.*

A gland is an organ whose special work is to separate materials from the blood for further use in the body or for expulsion, the products being known as secretion and excretion. The essential parts of a gland consist of a basement membrane, on one side of which are found actively growing cells; on the other is the blood current, flowing in exceedingly thin-walled vessels known as the capillaries. The cells are able to select from the blood whatever material they need and which they elaborate into the particular secretion. The most important glands are (a) the salivary glands—the function of which is to secrete saliva; (b) the pancreas—to secrete pancreatic juice; (c) the gastric glands—to secrete fluids to digest proteids; (d) the sweat glands—whose function is to secrete from the blood salts and water, to be eliminated from the body; (e) the kidneys—to secrete the urine to be eliminated from the system.

5. *Why is it very injurious to study when very weary?*

Because we are requiring of the organs more than they can naturally stand. A sense of fatigue is the mute appeal of the body for a brief respite from labor, and the appeal should, if possible, be heeded. If this appeal be not met, the future exertion exhausts far more than if the body had been even slightly refreshed.

6. *Of what use is pain?*

The general use of pain is to guard the system against danger and destruction. Were it not for this sensibility to pain, important parts of the body might be irreparably injured without the knowledge of the individual. Thus, the skin might be almost boiled by the hot water of a bath, or roasted by exposure to a hot fire, or the eye might become intensely inflamed by long exposure to bright sunlight, or by the continuance therein of foreign particles which have lodged upon the surface of the ball.

7. *Explain how the oxygen of the air finds its way to the blood.*

By inspiration the air enters the air-cells of the lungs. The oxygen passes through the walls of the air-cells and the walls of the blood capillaries surrounding the air-cells, before it reaches the blood corpuscles. These contain *haemoglobin* with which the oxygen unites, forming oxy-haemoglobin.

## ARITHMETIC.

1. In what respect does the disciplinary value of Oral Arithmetic differ from that of Written Arithmetic?

In oral arithmetic, the memory is vigorously trained, and the mind is thoroughly exercised in rapid thinking, especially along analytical lines. In written arithmetic, the mind is trained in those processes requiring deeper and more prolonged thought.

2. Reduce to a simple fraction,  $\frac{3\frac{1}{2}}{1\frac{1}{2}}$

$$\frac{1}{2} + \frac{1}{2} = 1\frac{1}{2}; 1\frac{1}{2} = \frac{3}{2}; \frac{3}{2} + \frac{1}{2} = \frac{4}{2} = 2;$$

$$3\frac{1}{2} = \frac{7}{2}; \frac{7}{2} \div \frac{3}{2} = \frac{7}{2} \times \frac{2}{3} = \frac{7}{3}, \text{ ans.}$$

3. Multiply 27 thousandths by 8 hundredths and divide the product by 12 millionths (decimally).

$$.027 \times .08 = .00216; .00216 \div .000012 = 180, \text{ ans.}$$

4. At what price must a 6 per cent. stock be bought to yield 5% on the investment? Analyze.

5% of the price must equal \$6;

1% of the price must equal  $\frac{1}{5}$  of \$6 = \$1.20;

and 100% of the price must equal 100 times \$1.20 = \$120

Hence, the answer is \$120 per share.

5. To what extent would you use formulae for the solution of problems in percentage? Give reasons for your statement.

Formulae are not necessary; they are really harmful, for they tend to prevent the pupil from making the effort necessary to understand the principles upon which the formulae depend.

Percentage is a continuation of a special kind of decimal fractions, many of which may be easily changed to common fractions; hence, there is nothing new in percentage, and the pupil should not be led to think that it is a new and strange subject. It simply involves three elements, two factors and their product, and when any two of them are given, the wanting one is easily found.

6. Find the greatest common divisor of 1869 and 5795. Prove your method.

The greatest common divisor is 61. See Complete Arithmetic, pages 74 and 75 for the principles and the analysis constituting the proof.

7. Two months' note, discount \$14.70; rate 7%. Find face by true discount and by bank discount, without days of grace.

Bank discount is interest on the face of the note; true discount is interest on the present worth. In each instance, \$14.70 is interest, 2 months is the time, and 7% the rate. From these the principal is found to be \$1260. Solving the problem on the basis of bank discount, the \$1260 is the face. Solving the problem on the basis of true discount, the \$1260 is the present worth, to which the interest \$14.70 (the true discount) must be added to make the debt or the face; \$1260 + \$14.70 = \$1274.70, the face on the basis of true discount.

8. *The surface of the 6 equal faces of a cube is 1,350 square inches. What is the longest straight line entirely within the tube?*

$1350 \div 6 = 225$ , number of square inches in one face;  $\sqrt{225} = 15$ , the number of inches in one edge;  $15^2 + 15^2 + 15^2 = 675$ ;  $\sqrt{675} = 25.98+$ , the number of inches in the required line.

9. *A room 20 ft. long, 17 ft. 6 in. wide, will require how many yards of carpet 2 ft. 6 in. wide to cover it allowing no waste?*

It will take 9 strips 17½ ft. long, or 7 strips 20 ft. long. In either case, it will take 140 ft. of carpet; 140 ft. = 46⅔ yards.

10. *In a level pasture a post stands 50 ft. from one straight boundary fence and more than 60 ft. from the other boundaries. A horse is tethered to the stake by a rope 60 ft. long. Over how many square feet of pasture can he graze?*



Let C be the post and AB the fence 50 feet distant. The horse can graze over all the circle except the segment ABDA.

By the principle of the right-angled triangle AE = 33.166+; therefore, AB = 66.332.

In Ray's New Higher Arithmetic, page 389, we find the following rule for finding (approximately) the area of a segment of a circle:—

"Divide the cube of the height by twice the base, and increase the quotient by two-thirds of the product of the height and base."

Here, the height = 10; the base = 66.332; and by this rule, we find the area of the segment to be 449.73; subtracting this from the area of the circle, 11309.76, we obtain 10860+, the number of square feet over which the horse can graze. This result is correct to within a very small amount.

The area of the segment can be easily found by subtracting the area of the triangle ACB from the area of the sector ACBDA. To find the area of the sector, we need to know the value of the angle ACB, which may be found by trigonometry.

THE Gas City schools have started well for this year. The enrollment has reached 700, and twelve teachers are employed. W. O. Warrick continues as superintendent.

INDIANA UNIVERSITY.—During the past year the following books have been published by members of the faculty of Indiana University: "Plato, the Teacher," by Dr. William L. Bryan, Professor of Philosophy; "The Federal Constitution in Massachusetts," by Samuel B. Harding, Assistant Professor of History; "Latin Manuscripts," by Dr. H. W. Johnston, Professor of Latin; "The Qualitative Analysis of Inorganic Bodies," by Drs. R. E. Lyons and L. S. Davis of the department of Chemistry; "Trigonometry for Beginners," a revision of Locke by John A. Miller, Professor of Astronomy; "Civil Government of Indiana," by W. A. Rawles, Instructor in History; "American Orations," revised and re-edited, 4 vols, by Dr. J. A. Woodburn, Professor of American History.

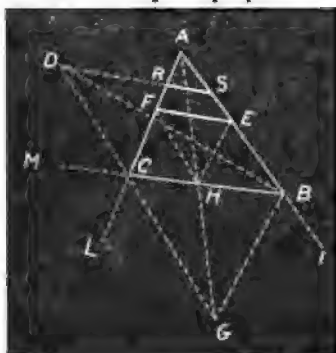
## FOOD FOR THOUGHT.

[Send all communications to W. F. L. SANDERS, Connersville, Ind. They should be received by November 18. Be prompt. Write only on one side of your paper.]

### SOLUTIONS TO PROBLEMS.

**PROBLEM 198.** "In a triangle ABC draw a parallel EF to the base BC, cutting the sides AB and AC (or AB and AC produced) in E and F so that  $BE + CF = BC$  or  $BE - CF = BC$ ."—*Chauvenet*, chosen by J. C. GREGG, A. M., Brazil.

Solution by the proposer :



Bisect the two exterior angles at C, the angles ABC and CBI by the lines DG, DB and BG meeting at D and G. Join AG, and draw HF and HE parallel to DG and BG. Join E and F and draw DS parallel to BC. Since EH and BG are parallel, angle EHB = angle HBG = angle GBI = angle HEB. Therefore, BE = BH, and in a similar manner we find CF = CH. Then  $BE + CF = BH + CH = BC$ . Then,  $AB : AE :: AG : AH :: AC : AF$  and EF is parallel to BC. Again, since DS is parallel to BC, angle BDS = angle DBM = angle DBS and BS = DS, and in

a similar manner we find  $CR = DR$ . Then  $BS - CR = DS - DR = RS$ .

**PROBLEM 207.** The sum of four numbers in geometrical progression is 15; the sum of their squares is 85. What are these numbers?—J. D. FRENCH, Whiting.

Solution by M. E. H., North Manchester :

Let  $x$  = the first number, and  $y$  the ratio. Then we have—

$$x + xy + xy^2 + xy^3 = 15 \quad \dots\dots\dots (1)$$

$$x^2 + x^2 y^2 + x^2 y^4 + x^2 y^6 = 85 \quad \dots\dots\dots (2)$$

Factoring (1) we have,  $x(1 + y)(1 + y^2) = 15$

whence,  $x^2 = \frac{225}{(1 + y)^2 (1 + y^2)^2} \quad \dots\dots\dots (3)$

Factoring (2) we have,  $x^2(1 + y^2)(1 + y^4) = 85$

whence,  $x^2 = \frac{85}{(1 + y^2)(1 + y^4)} \quad \dots\dots\dots (4)$

Combining (3) and (4),  $28y^4 + 28 - 34y^2 - 34y = 34y^2 \quad \dots\dots\dots (5)$

whence,  $14\left(y^2 + \frac{1}{y^2}\right) - 17\left(y + \frac{1}{y}\right) = 17$

Putting  $\left(y + \frac{1}{y}\right) = m$ ,  $14m^2 - 17m = 45$

whence,  $m = 2\frac{1}{2}$

Therefore,  $y + \frac{1}{y} = 2\frac{1}{2}$ , whence  $y = 2$ . Therefore,  $x = 1$ ; and the numbers are 1, 2, 4 and 8.

PROBLEM 208. Find the value of  $x$  and  $y$  in the equation,  $4(x + y) = 3 + y$  and  $x + y + x^2 + y^2 = 26$ .—ID.

Solution by HOWARD W. WOLFE, Atwood :

$3 + y = 4(x + y)$ .....(1), and  $x + y + x^2 + y^2 = 26$ .....(2);  
from (1)  $2 + y = \frac{8(x + y)}{3}$ ; if we add  $2 + y$  to the left member of (2)  
and subtract its equivalent we have  $x^2 + 2 + y + y^2 - \frac{5(x + y)}{3} = 26$ ; sim-  
plifying,  $x + y = 6$  or  $-4\frac{1}{3}$ .....(3); substituting in (1) we find  $xy = 8$  or  
 $-5\frac{1}{3}$ .....(4); square (3), multiply (4) by 4 and subtract the latter from the  
former, we have after extracting the square root  $(x - y) = \pm 2$  or  $\pm$   
 $\frac{\sqrt{-39}}{3}$ .....(5); from (3) and (5) we find  $x = 4, 2, \frac{\sqrt{-39} \pm 13}{3}$  and  $y =$   
 $2, 4, \frac{\sqrt{-39} \mp 13}{3}$ .

PROBLEM 209. From a cask of wine containing 100 gallons, 10 gal-  
lons are drawn, and the cask filled up with water; 10 gallons are again  
drawn, and the cask filled. This process is repeated until 100 gallons have  
been drawn from the cask. How much wine remains?

Solution by C. T. HARMON, Paxton :

By the conditions of the problem,  $\frac{9}{10}$  of contents of cask remain after  
each draw; therefore  $\frac{9}{10}$  of wine remains. Hence, if 10 draws are made  
(100 gallons liquid being drawn), there will remain  $.9 \times .9 \times .9 \times .9 \times .9$   
 $\times .9 \times .9 \times .9 \times .9 \times .9 \times .9 \times 100$  gals. (or  $.9^{10} \times 100$  gals.) = 34.867844+  
gallons.

PROBLEM 210. Find the values of  $x$  in the following equations :

$$\frac{a + x + \sqrt{2ax + x^2}}{a + x - \sqrt{2ax + x^2}} = b; \quad \frac{2x - 3b}{x - 2b} - \frac{3x}{x + 2a} = \frac{a}{2(a - b)}; \quad \frac{x + 1}{\sqrt{x}} = \frac{c + 1}{\sqrt{3}}$$

—A READER, Knightstown.

Solution by J. C. GREGG, A. M., Brazil :

$\frac{a + x + \sqrt{2ax + x^2}}{a + x - \sqrt{2ax + x^2}} = \frac{b}{1}$ ; since this is an equality of two ratios we  
have  $\frac{\sqrt{2ax + x^2}}{a + x} = \frac{b - 1}{b + 1}$ ; squaring,  $\frac{(a + x)^2 - a^2}{(a + x)^2} = \frac{(b - 1)^2}{(b + 1)^2}$ ; then,  
 $(a + x)^2 \left[ 1 - \frac{(b - 1)^2}{(b + 1)^2} \right] = a^2$ ; then,  $(a + x)^2 \left( \frac{4b}{(b + 1)^2} \right) = a^2$ ; then,  
 $(a + x)^2 = \frac{a^2 (b + 1)^2}{4b}$ ; then,  $a + x = \pm \frac{a(b + 1)}{4b}$  and  $x = -a \pm \frac{a(b + 1)}{4b}$   
 $\frac{x + 1}{x} = \frac{c + 1}{\sqrt{3}}$ ; clearing of fractions, we have  $x \sqrt{c} + \sqrt{c} = (c + 1) \sqrt{x}$ ,  
or  $x - \frac{c + 1}{\sqrt{c}} x = -1$ , and  $x - \frac{c + 1}{\sqrt{c}} x + \frac{(c + 1)^2}{4c} = \frac{(c - 1)^2}{4c}$ ;  
whence  $\sqrt{x} - \frac{c + 1}{2\sqrt{c}} = \pm \frac{c - 1}{2\sqrt{c}}$ ; therefore  $\sqrt{x} = \sqrt{c}$  or  $\frac{1}{\sqrt{c}}$  and  $x = c$   
or  $\frac{1}{c}$ .

**PROBLEM 211.** A man desires to set out a rectangular orchard of 864 trees, so placed that the number of rows shall be to the number of trees in a row as 3 to 2. If the trees are 7 yards apart, how much ground will the orchard occupy?

Solution by WALTER N. VANSCHOYOC, Whitesville :

$\frac{3}{2}$  of 864 = 576;  $\sqrt{576} = 24$ ;  $2:3 :: 24:36$ ;  $(24 - 1) 7$  yds. = 161 yds., width of field;  $(36 - 1) 7$  yds. = 245 yds., breadth of field; the orchard contains  $245 \times 161 = 39,445$  sq. yds.

**PROBLEM 212.** Determine the isosceles triangle in which the altitude is equal to one-third the whole perimeter.

Solution by C. T. HARMON, Paxton :

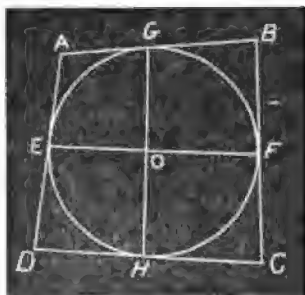
Suppose ABC to be the required triangle with base AB and equal sides AC and BC. CD perpendicular to AB divides the triangle into two equal right-angled triangles, ADC and BDC. In the triangle BDC,  $CD^2 = BC^2 - DB^2$ . If we let  $BC = 1$ , and  $BD = x$ , then  $CD = \frac{2(1+x)}{3}$  and  $CD^2 = \frac{4 + 4x + 4x^2}{9}$ ; by the conditions of the problem,  $CD^2 = 1 - x^2$ . Therefore,  $\frac{4 + 4x + 4x^2}{9} = 1 - x^2$ ; solving we get  $x = \frac{5}{13}$ ; therefore,  $BC:DB :: 13:5$  and  $BC:AB :: 13:10$ . Hence, the equal sides may each be 13 and the base 10.

**PROBLEM 213.** An old-fashioned dash churn half full of milk is 28 inches tall. The diameters of the upper and lower ends, respectively are 12 and 16 inches. What is the depth of the milk?—MARK MOFFETT, Waveland.

No solution received. We hope to be favored with one next time.

**PROBLEM 214.** Describe a cyclic quadrilateral about a given circle.—J. C. GREGG, A. M., Brazil.

Solution by B. G., Connersville :



Let ABCD be the required quadrilateral described about the circle O. Join the points of contact. AE and BF are tangents and will be equal when produced to meet. Therefore, angle AEF = angle BFE. Angle AEF + angle EFC = angle BFE + angle EFC = two right angles. In a like manner angle AGH + angle CHG = two right angles. Also, angle A + angle C = two right angles. We now have  $AGH + GHC + AEF + EFC + A + C =$  six right angles; but we know that  $AGH + GHC + AEF + EFC + A + C + EOG + HOF =$  eight right angles. Therefore,  $EOG + HOF =$  two right angles; but  $EOG = HOF$ ; therefore, each is a right angle and EF is perpendicular to GH. Therefore, to construct a cyclic quadrilateral about a given circle draw any two perpendicular chords and draw tangents at their extremities.



## ANSWERS TO QUERIES.

Dan J. Troyer, Goshen, writes with regard to Query 58, that it was Ft. Mackinaw and not Detroit that was captured through a game of ball.

QUERY 59. In the sentence, "For *us to know* our own faults is an advantage to us," what is the use of the italicized words?

This sentence, or one similar to it, is often given as a kind of puzzle. Very little good can come from any discussion of its intricate points. Some call "For us to know our own faults" the subject of "is;" "For" an introductory preposition; "us" its object; and "to know" an infinitive used adjectively modifying "us." Some call "us to know" the object of "For," and "us" an objective subject of the infinitive "to know." Others say that "For us" modifies "is," and that "to know" is the simple subject of "is." And there are still other ways of disposing of this sentence.

## SOLUTIONS REQUESTED.

A pole stands  $\frac{1}{4}$  of its length in the mud and  $\frac{1}{3}$  in the water; the part out of the water casts a shadow 16 ft. long; how long is the pole, if a part 4 ft. long casts a shadow 6 ft. long? [Complete Arithmetic, page 336, example 116.]

If 6 ft. of shadow is cast by 4 ft. of pole,

1 ft. of shadow is cast by  $\frac{2}{3}$  ft. of pole; and,

16 ft. of shadow is cast by  $10\frac{2}{3}$  ft. of pole.

$1 - (\frac{1}{3} + \frac{1}{4}) = \frac{5}{12}$ , the part out of the water;

$10\frac{2}{3}$  feet is also the part out of the water;

hence,  $\frac{5}{12}$  of the pole =  $\frac{3}{4}$  feet;

$\frac{1}{12}$  of the pole =  $\frac{3}{8}$  feet; and,

$\frac{1}{12}$  of the pole =  $25\frac{3}{8}$  feet.

Divide \$121 among 4 boys so that A will have \$3 to B's \$4; B will have \$5 to C's \$6; and C will have \$7 to D's \$8. [Id., page 338, example, 133.]

By the conditions, A's share is  $\frac{3}{4}$  of B's; B's is  $\frac{5}{6}$  of C's; and C's is  $\frac{7}{8}$  of D's. For every dollar D gets, C receives  $\frac{8}{7}$ ; B receives  $\frac{6}{5}$  of  $\frac{8}{7}$  =  $\frac{48}{35}$ , and A receives  $\frac{4}{3}$  of  $\frac{48}{35}$  =  $\frac{64}{35}$ ;  $\$1 + \$\frac{6}{7} + \$\frac{48}{35} + \$\frac{64}{35} = \$3\frac{3}{5}$ ; therefore, each will receive his respective sum as many times as the number of times  $\$3\frac{3}{5}$  is contained in \$121, which is  $38\frac{3}{5}$  times; multiplying \$1,  $\frac{6}{7}$ ,  $\frac{48}{35}$ ,  $\frac{64}{35}$  by  $38\frac{3}{5}$  we get respectively, \$38 $\frac{3}{5}$ , \$33 $\frac{3}{5}$ , \$28 and \$21. [Reprinted from JOURNAL of July, '95.]

## CREDITS.

J. C. Gregg, A. M., Brazil, 198, 208, 209, 210, 212, 214; W. R. Curtis, Hobart, 207, 208, 211; C. T. Harmon, Paxton, 209, 211, 212; S. H. Welty, Nappanee, 209; D. M. Deeg, McCutchanville, 202, 203, 205; J. D. French, Whiting, 198, 209, 211, 212; John Morrow, Charlestown, 202, 203, 205; Howard W. Wolfe, Atwood, 207, 208, 211; Clarence E. Reid, Winamac, 198 (two solutions), 208, 209, 210, 212, 213.

### PROBLEMS.

215. The north and south sides of a field are parallel; the other two sides are equal. The north side is 54 rods in length, and the south side is 18. A tree in the east side is 10 rods from the northeast corner, and 34 rods from the southwest corner. Required—the length of the equal sides, and the area of the field.

216. A, B and C start at the same time to travel to a town 40 miles distant. A walks at the rate of 1 mile an hour, B, 2 miles an hour, while C rides 8 miles an hour. C rides to the end of the journey, and then back until he meets A, whom he picks up and carries a certain distance, then again rides back and picks up B, whom he carries just far enough to allow all three to reach the town at the same time. Find the time of the trip.

217. Draw through a given point within a circle a chord which shall be divided at that point in mean and extreme ratio.—Phillips and Fisher, chosen by J. C. GREGG, A. M., Brazil

218. A post stands in a street so that from its top, a wire 80 feet long reaches to a roof 55 feet high on one side of the street; and a wire 95 feet long reaches to a roof 64 feet high on the other side of the street. The two wires make equal angles with the post; required, the height of the post.

219. The straight line joining the middle of the base of a triangle to the middle point of the line drawn from the opposite vertex to the point at which the inscribed circle touches the base, passes through the centre of the inscribed circle.—PHILLIPS AND FISHER.

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## TOWNSHIP INSTITUTE OUTLINES.

### PLATO'S REPUBLIC.

A careful study of Plato's *Republic* convinces us of the truth of Professor Jowett's view. He says: "Plato is the first writer who distinctly expresses the thought that education is to comprehend the whole of life, and to be a preparation for another in which education is to begin again. This is the continuous thread which runs through the whole of the Republic, and which, more than any other of his ideas, admits of no application to modern life."

Beginning with a discussion of the common view concerning the advantage and the disadvantage of practicing justice, Plato leads to a consideration of the fundamental principles which control the relations of men to one another in society; and, finally, to the means by which character is formed—education.

Glaucon opens the discussion by stating that human law is, in reality, a compromise between self-interest, on the one side, and the desire of retaliation for injuries received, on the other. He assumes that all men are governed by self-interest in their dealings with one another, and that the compulsion of law is needed to cause justice to be done. Right in the abstract—the idea of putting one's self in the place of another, and then doing to that

other as, in the same circumstances, he would wish to be treated, seems entirely wanting in Glaucon's presentation of the question. In his theory, license is synonymous with liberty, but since men see that this principle, when generally acted upon, must eventually result in the utter destruction of society, they have invented processes of law as a compromise.

Chaucer's friar, who for the sake of getting a bountiful meal, gave easy penances to the well-to-do; and who made the giving of money a substitute for heart repentance, saying that, "Instead of weeping and prayers, men might give silver to the poor friars," was a lineal descendant of the men who, in Plato's time, taught the doctrine that the indulgence of the gods could be bought, and atonement for sin be made by libations and sacrifices. Corrupt men in all ages have imposed upon the anxieties of the credulous who seek to purchase immunity to sin and ease to their consciences by offerings to the Deity.

"Vice is a monster of so frightful mien,  
As to be hated needs but to be seen;  
But seen too oft, familiar with her face,  
We first endure, then pity, then embrace."

Thus does Pope express the universal truth which the Bible, and Homer, and Plato, and men of every age have acknowledged.

With consummate skill, Socrates expounds his doctrine concerning justice as principle and as practice by grounding it upon the inherent nature of society in the State. Men who persist in blindness when the issue is confined to their own personal interests may often be led to see and assent to the truth in its general application.

Since a large share of teaching relates to the relations of man to man, the teacher may profitably make use of this illustration in the teaching of history and civil government; of geography and social ethics. Character in literature also embodies the same principles in living illustration. Pupils may be led to see that the school itself is a miniature state, and their assent being given to the principles involved, their reason will lead them to yield consent to whatever government is necessary for the good of the whole.

Differing natural gifts and the individual limits of time and strength, they will readily discover to be fundamental reasons for the common processes of exchange and the varying occupations with which they are familiar. But they should also be led to see, as Socrates so aptly enforces, that all men, of whatever occupation, need equally to be trained in the virtues of temperance, justice and love of truth; for the end of education is the attainment of a courageous and virtuous life.

Since in our day, the making of many books has made choice in reading of first importance, an intelligent appropriation of the teachings of Plato concerning the true test of good literature is of especial value to all who have anything to do with the education of youth. The intrinsic quality of a piece of fiction, whether in prose or poetry, may be detected from the feelings and desires which it has aroused in the reader. To learn of the fact of sin through reading does no harm unless the sin is made so attractive as to excite the desire of imitation. Milton has stated this well in saying:

"Evil into the mind of God or man  
May come and go, so unapproved, and leave  
No spot or blame behind."

It is not the knowledge of evil, but its approval, that does the harm. Shakespeare has delineated sin in many aspects, but his pictures never make evil seem desirable or heroic. Plato's objections to the poetic representations of the gods and heroes as guilty of practices which should be condemned in men; and his insisting that they should give children only those stories which represent them as actuated by noble attributes alone, such as truth, justice, unchangeableness, etc., are inspired by the belief that it is imperative that true ideals should be presented to children for imitation; for "imitations, beginning in early youth, at last sink into the constitution and become a second nature of body, voice and mind." There certainly is no worse lie, i. e., none which does more harm, as Plato intimates, than giving a false impression of what is true and noble.

The taste for good reading, i. e., for such reading as presents truth in forms of beauty, may be made one of the earliest acquirements, and since it may be, it ought to be; and teachers who appreciate the force of Plato's teaching in this direction will make this one aim of their own work.

Plato does not overrate the moral influence of the daily presence of beautiful forms of art and architecture to the eye. The school room can furnish such ideals to the children by placing nobly beautiful pictures upon the walls.

The Greek division of means of education into music for the soul and gymnastics for the body, music including all the arts and sciences, was based upon the idea that education must provide for an all-round development—an idea which is now coming to be generally accepted.

Socrates believes that this symmetrical, harmonious education can be secured only by selecting from both music and gymnastics what tends to simplicity. Like Wordsworth, he would inculcate plain living for the sake of high thinking.

The idea of Socrates concerning the remuneration of guardians, if put into practice to-day, would certainly remove from office-seeking one of its main temptations. To receive office simply as a deserved tribute paid to intelligence and virtue, with no personal emoluments whatever, Socrates believes to be the only security for absolute integrity in public life.

MRS. LOIS G. HUFFORD.

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#### NOTES ON LANGUAGE ARTS.

The ordinary reading lesson has not served its purpose unless it has given to the pupil greater skill in oral expression. While oral reading is not of paramount importance it is not to be valued lightly. Expression serves as a revelation of the inner state of the reader, but at the same time exerts a reflex influence. The full import of a piece of literature does not take hold of the learner until he has given oral expression to the thought. Certainly few will doubt that the effect upon the hearer is greater as the reader shows skill in adapting voice, face, and body to the expression of the thought.

The simpler this reading the more really artistic. It is not the straining to imitate the superficial, ignorant pretender that issues in good reading. This rather tends to a degradation of what really is a fine art when kept within the limits of sincerity.

Much improvement is shown by the rational methods employed in the teaching of singing in the various classes of schools. There may be some climatic reasons for the unmusical American voices. More reason exists, therefore, for a systematic effort in the direction of voice training in connection with both singing and reading. Nothing can take the place of a good systematic drill in scales, in sounds of letters and words. In this kind of work good models are essential. The teacher must see to it that he can read well, can sing at least a good clear tone.

The repeating from memory selections assigned for the purpose or selected by the children should frequently be required. There must be a mastery of the subject matter before there can be the ideal condition for the expression of the thought. Hence too much emphasis cannot be placed upon the preparation for oral reading. No one should be willing to read anything worthy the name literature before he has become sufficiently familiar with it to have the thought in mind. Oral reading pre-supposes an acquaintance with the thought to be expressed. Otherwise there is a mere word calling. For too often, this word calling is not well done but rather degenerates into a stumbling over a list of unintelligible jargon dignified by being called reading. It should be the aim to give to the child the power to give utterance to beautiful and powerful thought in a clear, simple manner such as may give him and his hearers an opportunity to enjoy the good things put into books. The school dialogue is a valuable means in gaining naturalness of expression. Story-telling compels freedom from the printed page and hence tends to unaffected expression. While it may be a very rare accomplishment for one to be able to read as he talks, it is good to hold this up as an ideal which if cherished must help toward reaching the desirable end of simple, straightforward reading. Breathing exercises, light gymnastics, phonic drill, music lessons all contribute to the end of good oral reading and therefore should have their due emphasis in every day's work of the schools.

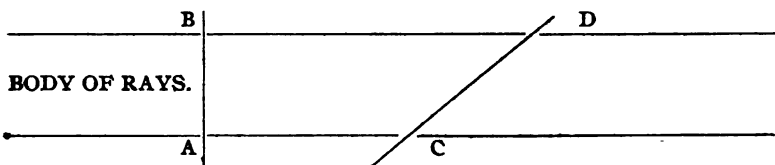
EMMA MONT MCREA.

#### NOTES ON GEOGRAPHY.

*Climate.*—When we speak of the climate of a country, we may refer to the *temperature*, or the degree of *moisture*, or *healthfulness* or *unhealthfulness* of the region. The last is generally the result of the other two. The pupils in the advanced grade should be brought to see the causes of heat and of moisture in the different portions of the world, as a basis for estimating the character of the climate in one or all of the particulars mentioned.

1. Recall what was previously taught of the cause of a change of seasons in the temperate zones. The reason why it is so warm at the equator was shown to be the great number of rays of the sun that fall upon any portion of the surface, caused by the vertical position of the sun. Show them again by blackboard illustration how it is, that when a body of rays strike a

surface obliquely they are spread over a much larger surface than they are when they strike it perpendicularly. The following method of illustration will show this very clearly :



The same body of rays that fall upon the surface A B, will be spread over the much larger surface C D when the rays strike the surface obliquely. Any given amount of surface, therefore, receives many more rays at the equator than the same area would receive in the north central states. Hence there is more light and more warmth at the equator.

Then show that this degree of warmth and light will become less as we approach the poles.

Lead the pupils to see, also, that in the north central states, for instance, that surface is warmer that inclines to the south than when it inclines to the north, and that vegetation is earlier.

2. Then show to them the effect of height upon temperature. If they ascend about three miles above the sea at the equator, they will reach a region of perpetual frost. The frost line gradually approaches the surface, as we go north or south.

They have now a basis for estimating the temperature of places on the surface of the globe, and can approximate the temperature of any locality if they know its distance from the equator and its height.

3. The next thing is to get some idea of the cause of moisture. The heat of the sun evaporates the water on the surface, and it rises into the air. The cold of the upper regions condenses it again and it falls in rain or snow. This is the general fact to be kept always in mind. What are the conditions favorable to rain in some localities, and unfavorable in others, is a matter that will be discussed at length in the study of physical geography. And yet the pupils in this grade can learn of the prevailing direction of winds and many other matters in the different parts of the world, and at different seasons of the year. Wind from a warm ocean to a cold land surface will cause rain, for the same reason that in some hot summer days a pitcher of ice-water will "sweat" as some people commonly say. This is because cold air will not hold so much moisture as warm air, which fact children can learn as well in this grade as at any time. If, then, a warm current of air, very full of moisture rises until it gets so cold that it cannot hold this moisture any longer, then it will fall in rain or snow or will appear as clouds. The particular causes of rain are very numerous, but the general cause is always present, that moist air is cooled down beyond the point where it can hold its moisture any longer and drops it in rain or in some other form.

Some places have more rain than others. This is due to a union of many causes, and why any particular place has a dry or a wet climate can be shown to the pupils so that they will understand it fairly well, provided the

teacher understands it. Every teacher of geography should have a good physical geography constantly at hand, and should get clear ideas of all the principal facts of climate and their causes.

The subject of winds, both permanent and variable, is not much more difficult than is that of temperature. At least the general laws of movement of currents is easily understood. The course suggests questions that suggest the answers to most of the difficulties that the pupil will meet in understanding these.

Where a country is so located that moist winds cannot reach it, there is a desert. Where it is warm and there is much rain there is very rank vegetation.

The climate and vegetation indicate the animal life in a country, and very largely the character of the people who inhabit it. Explain these facts to the pupils and set them to work to think out for themselves why there are deserts in Asia and Africa, and North America, and why other countries on these continents are very fertile.

Draw an outline map of North America and mark off the warm, temperate, and cold regions with chalk of different colors; the rainy and dry regions with chalk of other colors; the different kinds of vegetation with still other colors. But be sure that the pupils do not study the map; but that they use it to help them to form in their imagination the country about which they are studying, and to see it on the globe.—*Public School Journal*.

**THE WORLD RIDGE**—Begin at the southern point of South America and trace the chief highlands of the world (by way of Bering's Strait) until you reach southern Africa, and the chain you have followed is somewhat like a horseshoe in shape, and is called the "World Ridge."

## MISCELLANY.

### EDUCATIONAL PRESS ASSOCIATION OF AMERICA.

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#### PAPER.

American Primary Teacher.....	Boston, Mass.
American School Board Journal.....	Milwaukee, Wis.
American Journal of Education.....	St. Louis, Mo.
Canada Teacher.....	Toronto, Can.
Colorado School Journal.....	Denver, Colo.
Education.....	Boston, Mass.
Educational News.....	Newark, Del.
Florida School Exponent.....	Jacksonville, Fla.
Indiana School Journal.....	Indianapolis, Ind.
Interstate Review.....	Danville, Ill.

#### POSTOFFICE.

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Kindergarten Review.....	Springfield, Mass.
Michigan Moderator.....	Lansing, Mich.
Midland Schools.....	Des Moines, Ia.
Missouri School Journal.....	Jefferson City, Mo.
New England Journal of Education.....	Boston, Mass.
News and Practical Educator.....	Taylorville, Ill.
Ohio Educational Monthly.....	Columbus, Ohio
Pennsylvania School Journal.....	Lancaster, Penn.
Popular Educator.....	Boston, Mass.
Primary Education.....	Boston, Mass.
Primary School.....	New York, N. Y.
Public School Journal.....	Bloomington, Ill.
School Bulletin.....	Syracuse, N. Y.
School Education.....	Minneapolis, Minn.
School Journal.....	New York, N. Y.
Southern Schools.....	Lexington, Ky.
Teachers' Institute.....	New York, N. Y.
Teachers' World.....	New York, N. Y.
Texas School Journal.....	Austin, Texas.
The Northwestern Monthly.....	Lincoln, Neb.
Western School Journal.....	Topeka, Kansas.
Western Teacher.....	Milwaukee, Wis.
Wisconsin Journal of Education.....	Madison, Wis.

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HARTFORD City sustains a four-year course of study in its high school. F. M. Beard is superintendent.

THE INDIANA STATE NORMAL has in attendance nearly one hundred more students than attended the fall term last year.

LAWRENCE County. A manual that gives a good deal in small compass. W. E. Stipp is the new county superintendent.

THE Teachers' College, University of Buffalo, has a strong faculty, with Frank M. McMurry at its head. The catalogue for 1897-98 makes a good showing for the school.

THE GAS CITY schools have started well for this year. The enrollment has reached 700, and twelve teachers are employed. W. O. Warrick continues as superintendent.

THE PHYSIO-MEDICAL COLLEGE of Indianapolis is said to be the largest and best college of that school of medicine in the United States. C. T. Bedford, M. D., is the secretary.

THE Southern Indiana Normal has sent out its catalogue for 1897-8, which gives all needed information in regard to the school. It can be had for the asking. Address the president, D. B. Gilbert.

THE Northern Indiana Normal School at Valparaiso has very much strengthened its pedagogical department. Under the immediate direction of Sanford Bell this department has taken a high stand.

GOODLAND has started a library with about one hundred well selected books, for the most part the result of an entertainment given by the school children. There are sixty-five students in the high school of this place.



THE Porter County teachers have organized a child-study association, with Sanford Bell, of the Northern Indiana Normal School as president. Whatever Mr. Bell undertakes succeeds, and good results are expected from this organization.

EVANSVILLE has an active truant officer who is enforcing the compulsory law. His report in the local papers of his visits to various homes, makes good reading. The law here is fully accepted, and the attendance in the schools is increased.

LAGRANGE County and Noble County have for the past two years held a joint institute at Rome City. Here, on a well-shaded island in a beautiful lake, are "Assembly" buildings, well suited for such a meeting. Such a union meeting insures pleasure, improved facilities, superior instruction and economy.

HAMILTON County. Every township in this county supports a high school; every teacher in the county takes the Reading Circle work; music is taught in most of the schools. "The new compulsory law is giving us the best attendance we have ever had." Thus writes superintendent E. A. Hutchens, who is a helper in all good things and a prime mover in many of them.

TIPPECANOE County. The outline of study, for Tippecanoe County, supplemental to the State course of study, is at hand. It is very complete. The course of study for the town and township graded schools is made for three years. A peculiarity is that it provides for no language except the English, no natural science and no elective subjects. J. M. Sullins is county superintendent.

THE SKYMOUR schools have the largest enrollment in their history—1107. The high school enrolls 134 pupils, twenty-five of which are non-resident. They are badly in need of a new high school building, the present one being so crowded that the piano had to be moved to the hall and the reference book tables used for desks. H. C. Montgomery is superintendent and T. E. Sanders is principal of the high school.

DUBOIS County. Superintendent George R. Wilson has issued a Hand-Book for his county which is unique. It is composed of the announcement for the Young Peoples' Reading Circle, the State Manual and Course of Study, Outlines for Township Institutes and Dubois County Schools, a Supplement to the State Outline for 1897-98, all neatly bound together with cloth cover. This is certainly an excellent idea. Supt. Wilson has a great many original ideas.

INDIANAPOLIS BUSINESS UNIVERSITY is one of the oldest and one of the best schools of its class in the State. E. J. Heeb has entered on his fourteenth year as principal and has made an unqualified success of the school. He has not only made the school pay, but he has kept up with the best thought in his line of work and has given his school a good standing. He never makes promises he can not fulfil. He never guarantees positions to graduates, and yet he is not able to supply the demand for well qualified bookkeepers and clerks.

EARLHAM COLLEGE. In reply to your postal I offer the following: The college year has opened with a gratifying increase in attendance over last year. Our senior class numbers forty-five members. A new physical laboratory was opened at the beginning of the term with a large equipment of modern apparatus. Earlham College now offers superior laboratory facilities in chemistry, biology and physics. The state convention of high school science teachers will meet at Earlham College next spring. There is a marked increase every year in the number of Earlham graduates who

enter upon university courses of study. This year three are in Harvard; five in the University of Pennsylvania; one in Columbia College; two in Chicago University; one in the University of Michigan; one at Johns Hopkins, and three at Bryn Mawr. For information address the president, J. J. Mills, Richmond.

**DECATUR County.** The Board of Education has voted to adopt a uniform course of study for the high schools of the county. The county has ten schools, outside of Greensburg, doing work in the higher branches. During the week of the County Institute an organization of all the high school teachers of the county was effected. A committee from this organization met with a like committee from the County Board and adopted the course of study as outlined by the State Board. The teachers' organization meets at Greensburg the fourth Saturday of each month. Topics of general interest are assigned and discussed. From the working of the uniform course of study we expect to add dignity to, and increase the value of work done in the village high schools. Some of these do one year's work, others two. However that may be, the pupil can feel assured that when he completes a year's work, he will receive credit for it. The teachers are either students or graduates of some higher institution of learning. Elmer C. Jermon is the new county superintendent.

**DELAWARE County** held its annual institute session during the week beginning August 30. An active interest was manifested throughout the entire session. The enrollment reached a higher mark than that of any previous year. With Dr. Holbrook, Sherman L. Davis and Carrie B. Adams in charge the teachers were content to continue in the institute work, regardless of disagreeable weather. More appreciation of the work done was manifested than heretofore, which speaks well for our schools. The teachers are going out to their schools with a better understanding of the importance of their work and the responsibility they bear, by having spent a week together. Holbrook's work was largely along the line of method, while Davis's work was along the line of higher education, and better preparation for the work to be done. Mrs. Adams presented the subject of music in a delightful way only possible to her. Very truly yours,

CHAS. A. VAN MATRE.

[The above was accidentally omitted from last month's JOURNAL.]

**PURDUE UNIVERSITY.**—But few people are aware of the large amount of work being done for the benefit of the general public by Purdue University, aside from its work of educating students in a broad and thorough manner. The extremely valuable work of the experiment station, by which important information on agriculture, horticulture and animal industry is disseminated, also the good work done in the conducting of Farmers' Institutes throughout the State, are not as widely known and appreciated as they should be. The Station sent out last year seven regular and twenty-one newspaper bulletins, a total issue of over 110,000 pamphlets, carrying to the people of our state information of great value. The Farmers' Institutes were attended during the year by over 40,000 people, and on every hand were heard words of commendation for the management.

Besides all this, President Smart believes that Purdue should use her faculty and laboratories turning out information on various subjects which will be of interest to the community. The University has recently issued a series of five bulletins relating to public health, and four relating to pure foods, also five from the engineering department upon subjects of interest to the manufacturing class of our citizens, all of which have had a wide circulation. All this is exclusive of many articles prepared by her faculty and published in various scientific and education journals throughout the country. Purdue opens this year with fifty more students than last year, and the work of the University is progressing more smoothly and promptly than ever before.

**PERSONAL.**

W. L. BECK is first at Sellersburg.

R. F. MILLERS presides at Topeka.

WALTER S. KING reigns at Clark's Hill.

D. W. Thomas is still faithful to Elkhart.

ISRAEL HATTON is the director at Dayton.

C. M. LEIB sails the craft at Shipshewanna.

F. W. BAXTER superintends at Wolcottville.

D. L. KEMPER grants excuses at Millersburg.

W. E. HARSH makes things pleasant at Avilla.

H. M. APPLEMAN is principal at South Milford.

E. L. PRICKETT guides the youth at Wolf Lake.

W. C. PALMER is still superintendent at Ligonier.

E. E. OLCOTT seems to be a fixture at Charlestown.

J. W. EARLE is doing the highest work at Wawaka.

D. A. LAMBRIGHT is superintendent at Kendallville.

D. W. TUCKER is principal of the Sycamore schools.

E. BROUGHTON directs the young ideas at Rome City.

E. L. HOLTON is master of the situation at Henryville.

H. S. GILHAMS continues to direct the schools at Lima.

ETTA DELAY is principal of the La Grange high school.

H. D. MILLER commands the school forces at Cromwell.

IDA HUTCHESON is principal of the Mitchell high school.

ORLAND ROSS stands responsible for the schools at Utica.

A. B. GUTHRIE is principal of the high school at Bedford.

AMBROSE W. LAUGHTIN is serving his first year at Stockwell.

W. N. PARKS continues in control of the schools at Lexington.

MAGGIE J. ERISMAN continues as principal at South Lafayette.

OTIS JOHNSON has entered upon his first year's work at Romney.

OSCAR P. BAKER continues to superintend the Winchester schools.

T. A. MOTT has the Richmond schools well in hand—just like him.

G. W. ELLIS is serving his fifth term as superintendent of Elkhart county.

W. E. ALEXANDER can answer your questions in regard to the schools at Bedford.

W. A. FOX, former county superintendent, is now superintendent of the Albion schools.

J. B. PEARCY is still at the head of the Anderson high school and is doing good work.

A. E. KNOWLES is serving his third year as principal of the schools at New Washington.

E. S. HALLET has bought out other interests and is now at the head of the Normal School at Corydon.

W. A. FURR, an Indiana University man, has accepted the principalship of the Lincoln school at Ottawa, Ill.

F. M. MERICA after spending some time as a student at Chicago, has taken charge of the La Grange schools.

D. W. SANDERS is principal of the Wallace graded school. His "manual" is concise, terse, and unique.

D. B. GILBERT is now president of the Southern Indiana Normal at Mitchell. The reports of the school are favorable.

PRESIDENT J. A. JOSEPH says that fifteen of the present county superintendents are former students of the Central Normal.

MRS. LEVA M. FOSTER continues to superintend the North Vernon schools in such a manner as to give general satisfaction.

J. J. ECKMAN, for the past six years superintendent of schools at Wilmington, Ill., is principal of the high school at Goodland.

J. C. DICKERSON has been retained as superintendent of the Goodland schools with an unasked-for increase of one hundred dollars in salary.

D. H. ELLISON, formerly superintendent of Lawrence county, and for four years State Senator, is still superintendent of the Mitchell schools.

G. A. TALBERT, an excellent science teacher, formerly of La Porte, has gone to West Superior, Wis., to do the science work in the high school.

MAUD ELLIS, a graduate of the State Normal, is serving, in a very acceptable way, her third year as assistant in the Goodland high school.

STATE SUPERINTENDENT GEETING has spent every cent the State allows him as a travelling fund. All his predecessors have not done this.

JNO. DONALDSON still continues in charge of first district school in Terre Haute—a position he has filled with ability for lo, these many years.

D. R. ELLABARGER is principal of the Richmond high school. His school has already enrolled 315, the largest enrollment in the school's history.

E. G. MACHAN, superintendent of LaGrange county has held his office for eight terms of two years each and is the oldest county superintendent in the State.

LAURA B. CARTY, one of Parke county's best primary teachers has been induced by Superintendent Elson to take a place in the schools of West Superior, Wis.

P. P. STULTZ, for many years superintendent of the Jeffersonville schools, has moved his family to Bloomington with a view of entering the University as a student.

# Delicious Drink

## HOSFORD'S ACID PHOSPHATE

with water and sugar only, makes a delicious, healthful and invigorating drink. Allays the thirst, aids digestion, and relieves the lassitude so common in midsummer.

Dr. M. H. Henry, of New York, says: "When completely tired out by prolonged wakefulness and overwork, it is of the greatest value to me. As a beverage it possesses charms beyond anything I know of in the form of medicine."

Descriptive pamphlet free. Rumford Chemical Works, Providence, R. I. Beware of Substitutes and Imitations. 6-11.

ROLAND ESTES, superintendent of the Westfield schools, died of typhoid fever Oct. 13. He was one of the best teachers in his county, and held in high esteem by all who knew him.

PORTIA BELL came to the home of Sanford and Gertrude S. Bell, Oct. 21, and came to stay. She will doubtless be of great assistance to her father in connection with his "child-study" work.

A. R. TAYLOR, president Kansas State Normal; W. R. Snyder, superintendent Muncie schools; and Senator Freemont Goodwin, of Williamsport, have been appointed "visitors" to the State Normal school.

N. G. WARK, an Indiana man, who is superintendent of the schools at Watertown, S. D., is now at his old home, Vandalia, on leave of absence on account of ill health. He hopes to resume work in a short time.

SUPERINTENDENT W. H. ELSON, of West Superior, Wis., says that his school board has adopted a rule forbidding corporal punishment in the schools and it works well. He says that the "free-text-book law" also works well.

F. D. HESTER, of New Albany, who has been assistant in the State superintendent's office was married to Miss Marie Gwynne, of Indianapolis, Oct. 20. Mr. Hester has made many friends since he has been in his present position and they wish him "much joy."

MRS. ELIZA WELLS, wife of David Wells, of Hamilton county, died Oct. 1, of typhoid fever. She taught with her husband for twelve years and was a superior teacher and a superior woman. She leaves many friends who sympathize deeply with her bereaved husband.

PROF. A. C. SHORTRIDGE, the first superintendent of the Indianapolis schools, who was for many years one of Indiana's leading educators, is now living on a farm, in the vicinity of Indianapolis. His general health is good, but he has almost lost his eyesight and gets about with difficulty.

W. N. HAILMANN, formerly superintendent of the LaPorte schools, still continues superintendent of Indian schools and is doing most excellent work. If this administration acts in the interest of the Indians and not in the interest of politicians, Dr. Hailman will continue just where he is.

THOMAS E. SANDERS, principal of the Seymour high school, was married to H. Myrtle Robertson, Sept. 29, 1897. Mr. Sanders is a graduate of Indiana University class of '95 and Miss Robertson has been one of the foremost teachers of Jackson county. THE JOURNAL extends congratulations.

MISS ADELAIDE BAYLOR, principal of the Wabash high school, has recently taken the degree of Ph. B. at Chicago University. She has been doing this work for several years and has not only done it well, but has received "honorable mention" for excellence of work. This is unusual for a non-resident student.

C. E. MORRIS is not superintendent of the Salem schools, as announced last month. The trustees had re-elected Mr. Morris last spring and he had done quite a good deal of work for the schools during the summer. Late Saturday afternoon, before the schools were to open on Monday, they presented Mr. Morris with a contract to sign, *at a reduced salary*. Mr. Morris felt that he had been very unfairly and unjustly treated and so tendered his resignation. The principal of the high school, H. B. Wilson, was promoted to take his place.

STATE LIBRARIAN W. E. HENRY is doing some good work for the State library. He intends to make a classification of all the subjects treated by the books so that he can direct the person asking for information upon a subject to the book containing such information. He also proposes to classify the enactments of the legislatures of the various states upon certain subjects so that the legislators may have the advantage of the information con-

tained in the library. He also proposes to collect the various books written by Indianians upon Indiana and add them to the library.

W. H. GLASCOCK has tendered his resignation as superintendent of the Institution for the Blind in order to complete his college education. He was on the very best of terms with his trustees and yet he resigns two and a half years before the expiration of the time for which he was elected. Mr. Glascock has had a varied and successful experience as an educator. He taught nine terms of district school; was two years principal of a graded school; served four years as superintendent of Hancock County, and two years as superintendent of the Greenfield schools. He resigned this place to accept the deputy's place under State Superintendent Vories. After serving there for three and a half years he resigned to accept his present position. At the end of his third year he resigns this in order to continue his studies. Mr. Glascock has made an unqualified success in every position he has filled. He is a Christian gentleman in the best sense in which that term is used, and is deservedly popular. There is no doubt that he could have had the nomination for Superintendent of Public Instruction on the Democratic ticket at either of the last two State conventions, but he positively declined to allow his name to be used. In his studies he expects to make a specialty of philosophy and literature. As Mr. Glascock is a popular institute instructor he will doubtless keep in touch with the educational interests of the State.

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### BOOK TABLE.

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HOUGHTON, MIFFLIN & Co., of Boston, have a national reputation for publishing high grade, classical literature and in cheap form, so as to bring it within the reach of all. Their *Riverside Series* is comprehensive and includes the best. Number 111, a double number, is made up of "The Princess," by Tennyson. No. 112 contains the first three books of "The Æneid," translated with introduction and notes. No. 114 is "Old Greek Stories Told Anew," by Josephine P. Peabody.

COMMENCING with November, *Harper's Round Table* will be published monthly instead of weekly, as heretofore. It will become a monthly magazine for youth. The principal feature of the publication in its new form will be stories—especially such as deal with adventure and acts of bravery, and the healthy, vigorous side of every-day life. In addition to fiction, there will be practical and instructive articles on hunting, fishing and sport generally; on travel and exploration, and all such subjects as the irrepressible energy of youth delights in. A point of additional interest is that the new *Round Table* will be published simultaneously in London and New York.

SONGS OF THE NATION.—A collection of Patriotic, Occasional, College, and Devotional Songs. Compiled by Charles W. Johnson; with an introductory chapter on Music in Schools by Leonard B. Marshall. Quarto, 160 pp., choicely bound in attractive board covers. Introductory price, 60 cents. Silver, Burdett & Company, Publishers, Boston, New York, Chicago, Philadelphia. The great importance of instilling a fervent love of country into the minds of our youth is coming to be clearly recognized. Nothing, however, can so stir the hearts of our youth, or so fill them with patriotic fervor,

as the singing of our best patriotic songs. A discriminating collection of them has long been needed, and is now furnished in the "Songs of the Nation."

OUTLINES FOR PRIMARY AND KINDERGARTEN CLASSES in the study of nature and related subjects, by E. Maud Cannell and Margaret Wise, is a new book just from the press of E. L. Kellogg & Co., New York. Price, 75 cts. This book is the work of E. Maud Cannell and Margaret Wise, of the Ypsilanti (Mich.) State Normal School. The Outlines are arranged first by months and then by weeks, the topic for each week being given with full outline for its presentation, the songs, games and stories that accompany it, the gifts, the modeling, cutting, pasting, etc. The correlation of the kindergarten and primary work with the study of nature is very interesting and will produce beautiful results. The book contains about 200 pages and is nicely bound in cloth.

THE AMERICAN GOVERNMENT is the title of a book by B. A. Hinsdale and published by the Werner School Book Co. of Chicago. This is a "masterpiece" in its line. It makes the American government the central subject for political study. Dr. Hinsdale is one of the ablest men in the country and he has handled this subject with vigor and clearness. It is intended especially for high school and academic grades. This is an important subject that should be universally studied not only in school but out of school. The average citizen will find this book interesting and profitable reading.

TRAINING FOR CITIZENSHIP by the same author and by the same publisher is a companion book of the above. It is a booklet of 64 pages and is designed to show how to teach and how to study the subject of civics. It is practical, suggestive and helpful, and is adapted to the wants of teachers in grammar and high school grades. Price, 10 cts.

A SMALLER HISTORY OF GREECE FROM THE EARLIEST TIMES TO THE ROMAN CONQUEST. By William Smith, LL. D. Revised, enlarged, and in part rewritten by Carleton L. Brownson, Instructor in Greek in Yale University: Harper & Bros., New York. The first edition of Dr. Smith's "Smaller History of Greece," a book which has enjoyed a deserved popularity in American schools, was published over thirty years ago. The new features of this revised edition may be briefly enumerated. Those chapters which deal with the constitutional history of Athens, the topography and monuments of that city, and the history of Greek literature have been entirely rewritten. An exhaustive pronouncing vocabulary has been incorporated with the index, which at the same time has received very considerable additions. An entirely new series of maps, plans and illustrations has been prepared for the revised edition. Particular prominence is given to the history of the origin and development of the various types of poetry which our civilization owes to the Greeks, and to a description of the architectural and artistic treasures of Athens. Retail price, \$1.00.

HART'S COMPOSITION AND RHETORIC, published by Eldridge & Bro., Philadelphia, price, one dollar. For nearly a third of a century the original

edition of this work has been a standard school text-book on the subject; there are few schools in the country in which it has not been used. Its popularity has been due to the merit of the book. The present revision of the book has been made by Dr. James Morgan Hart, Professor of Rhetoric and English Philology in Cornell University, son of the author of the original work. In the revision, Part I. has been left mainly in its original form, only such changes having been made as seemed desirable in the direction of conciseness and simplicity. Part II., on the other hand, treating of Invention, is wholly the work of the reviser in adapting the book to present needs. The chapters on Paragraphing and Composition-Writing are intensely practical, the subjects treated in them being reduced to first principles. In its new form, Hart's Composition and Rhetoric is in accord with the views and the teachings of the leading educators of the day, and with the spirit of pedagogical progress in this branch of study. We believe that the work will commend itself to progressive teachers.

**STANDARD LITERATURE SERIES.** Published by the University Publishing Co., N. Y. These books contain from sixty-four to one hundred and thirty pages each, sold at 12½ cents each for the single numbers, and 20c for the double, and have much to commend them to the favorable attention of teachers and pupils. They are well printed and neatly bound in stiff paper sides. They are selections where essays, poems and short stories are presented, and abridgements in the case of larger works of fiction. Long descriptions, discussions and discourses which only annoy and hinder young readers, are here cut out so that the story drives right to the point as a boy likes to have it. It is indeed a service to young readers to help them thus to an earlier appreciation of Scott and Dickens, and Cooper, for they will go on to other full works of these writers after they have a taste for them. The list of books in the series is already a long one. On our table we find Cooper represented by *The Spy*, *The Pilot* and *the Deerslayer*, Scott by *Rob Roy*, *Kenilworth*, and *Lady of the Lake*; Irving by *the Alhambra*, *The Sketch Book*, and *The Knickerbocker Stories*; Dickens by *Christmas Stories*, *Paul Dombey* and *Little Nell*; Tennyson by *Enoch Arden*; John P. Kennedy by *Horse shoe-Robinson*; Byron by *the Prisoner of Chillon*; Bulwer Lytton by *Harold*; Jonathan Swift by *Gulliver's Travels*; Hawthorne by *Twice Told Tales*, *Wonder Book*, and *the Snow Image*; Victor Hugo by *Ninety-Three*; R. H. Dana by *Two Years Before the Mast*; and Longfellow by *Evangeline*.

**METHOD IN HISTORY.**—For teachers and students. By Professor W. H. Mace, Syracuse University. Ginn & Co., Boston and Chicago. History, according to Professor Mace, is not simply a record of past events as the ordinary text-book states. History does not deal with events for their own sake, but only so far as they reveal the life of which they are the result. History deals with the life of a people in the process of growth, so that the content of history is not a fixed but a living and moving thing. The understanding of history, therefore, according to the author, requires the student to take ideas as germs and trace them through all phases of their growth. These ideas develop according to certain laws of continuity and differentiation and the learner must live over again the life of the people whose history



he wishes to know. The central idea of a period out of which events grow, Professor Mace is pleased to call the *organizing idea*. To seize these ideas, to follow the method by which they are embodied in the institutional life of a people is Professor Mace's method. The *three* periods of American history organized on the basis of a central idea are: 1. That of the growth of local institutions. 2. The growth of union. 3. The development of nationality. The development of these ideas constitute the large and valuable part of this book. The remainder of the book considers the elementary phases of history teaching. These are designated as the "sense phase of history" and the "representative phase of history." The book is a valuable one for all teachers interested in the subject of history and who are in doubt about the best way of presenting this subject to students.

UNCLE SAM'S SECRETS. A STORY OF NATIONAL AFFAIRS FOR YOUNG PEOPLE.—By Oscar Phelps Austin. Published by D. Appleton & Co., Chicago and New York. This is a book in a series designated as *Appleton's Home Reading Books*. The series is edited by Dr. W. T. Harris. These Home Reading books as they will appear from time to time will be classed as follows:— *First Division*—Natural history, including scientific treatises on plants and animals, etc. *Second Division*—Whatever relates to physics or natural philosophy, etc. *Third Division*—History and biography and ethnology, etc. *Fourth Division*—Literature and art. The book under consideration would naturally be classed in the third division. It has been written to awaken in the minds of the young reader an interest in the affairs of the nation. It is written in story form and relates how a package of U. S. bank bills that had been soaked, through an accident, by ink were taken back to Washington and redeemed by the government. The journey brings in a description of the U. S. mail cars and a detailed account of the mail service. A stop made at Philadelphia makes possible a visit to the U. S. Mint, where the transformation of metal into money is described in a conversational way. In New York, a visit to an ocean steamer makes possible a complete explanation of the foreign mail service. Conversations on bimetalism and the relations of gold and silver in the currency of various nations arise out of these various money considerations. A visit to the House of Representatives upon the arrival in Washington makes possible a discussion of the tariff question which is under discussion at that time. The redemption of the bills was finally accomplished, but not until a practical illustration of how the government detects counterfeiting is given. The story keeps up the interest and the reader is instructed and pleased at the same time. It is a most valuable book for boys and girls.

SCHOOL READING BY GRADES. By James Baldwin, Ph. D., editor of "Harper's Readers," author of "Old Greek Stories," "Old Stories of the East," "The Book Lover," etc.—Published by the American Book Co., Cincinnati, Chicago and New York. This series of readers comprises eight books, each book adapted to the work of a single school year. For the convenience of ungraded schools and for all who may prefer them in such form, the eight books will also be bound in five volumes corresponding to the ordinary five-book series of school readers. The book for the *First Year* is

beautifully illustrated with pictures in colors. Objects familiar to small children are at first represented and a gradual transition made to things remote and strange. In accordance with the method pursued in the majority of best schools, script is introduced at the same time with the Roman characters. Phonetic exercises, or lists of words for drill in the distinct enunciation of separate sounds are also of frequent occurrence. In the preparation of these lessons, the author has had a distinctly ethical purpose. Care has been taken always to turn the attention to that which is noble and inspiring and away from that which is gross and vulgar, thus paving the way for an introduction to the very best in literature. In the reader for the *Third Year* we find the story of the "Pied Piper of Hamelin" adapted to children of that school year, while in the readers for the fourth and fifth years we find *only* choice and standard selections adapted to the capacity of children of *those* years. A feature quite unusual in the ordinary reader is the selection of chapters from the New Testament as lessons. A careful examination can result only in one conclusion, and that is that these books have been prepared by a person with fine literary taste. James Baldwin, their author is an Indiana man. A tribute to him and his work may be found in the JOURNAL for Sept. 1897, written by Mrs. Emma Mont McRae.

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### BUSINESS NOTICES.

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**WANTED.**—Agents to take subscription for magazine in connection with a saleable article. Big pay. Heeb Company, 30 Penn. St., Indianapolis.

**HAIR** on ladies' faces, moles and other blemishes removed forever. **VARIN**, 25½ W. Washington St. Write or call when in the city. 7-5t.

**THE** first winter term of the Elkhart Institute, Elkhart, Ind., will begin on Monday, November 1 and continue ten weeks. A full corps of instructors. Circulars free. Address the Secretary. 11-1t.

**THOSE** who take the Business and Shorthand courses at the Indianapolis Business University secure good positions at once. Everybody knows it is the largest, oldest and best school in the State. 48th year opens Sept. 1.

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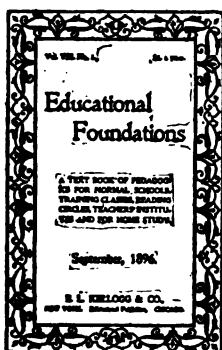
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